



Government of **Western Australia**
Department of **Transport**

Empowering a
thriving *community*



WA Incident Management Plan

Marine Oil Pollution



WA Incident Management Plan: Marine Oil Pollution

Prepared for Department of Transport

Prepared by Manager MEER

Date 4 September 2023

Objective number A17713865

Version control

Version No.	Date	Prepared by	Revision or issue descriptions	Issues to
1.0	4/9/2023	Glen McDermott	Initial Creation	MEER and Public

Amendment record

This guidelines document is reviewed to ensure its continuing relevance to the systems and process that it describes. A record of contextual revisions is listed in the following table.

Page No.	Context	Revision	Date

Approval

Manager – Maritime Environmental Emergency Response

The Government of Western Australia acknowledges the traditional custodians throughout Western Australia and their continuing connection to the land, waters, and community.

We pay our respects to all members of the Aboriginal communities and their cultures, and to Elders both past and present.

Immediate response actions

This section outlines immediate response actions required for the management of Marine Oil Pollution incident in WA, inclusive of those taken by a Controlling Agency and the Department of Transport as a Hazard Management Agency.

Maritime Environmental Emergency Response 24/7 On-call Process

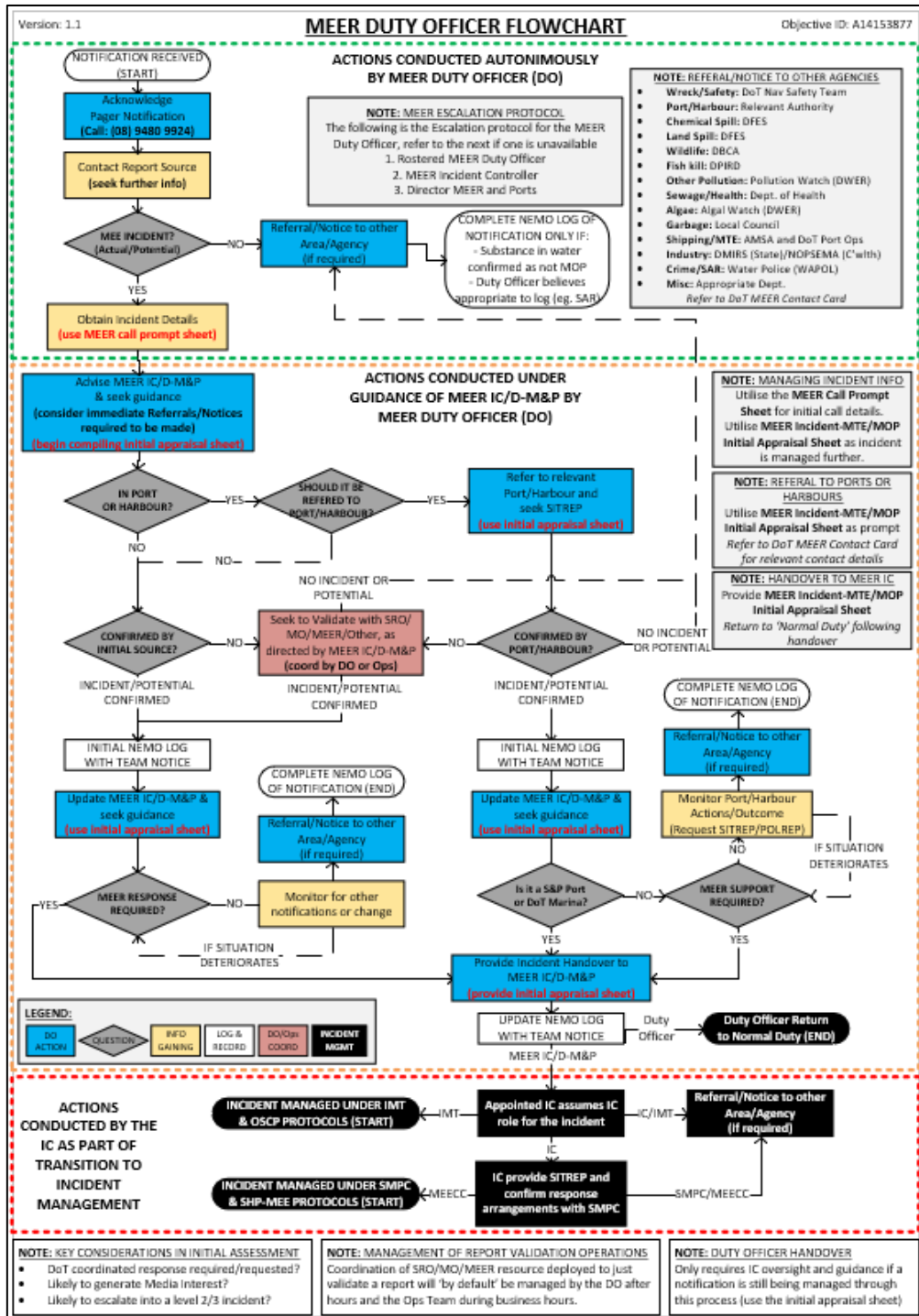


Figure 1: Maritime Environmental Emergency Response Duty Officer Process (DoT, 2023)

First Strike Response Plan

A first strike response for a Marine Oil Pollution incident is the prompt initial actions to protect the environment and that is intended to limit the effect of an incident until such time as other resources can be deployed in support. First strike requirements will vary from location to location but should include commencement of source control, initial containment and recovery and initial assessments/monitoring. First strike response will be facilitated by the agency/organisation with responsibilities for the port, maritime facility, or offshore petroleum activity where the Marine Oil Pollution incident has occurred and as per arrangements outlined in relevant Oil Spill Contingency Plans or Oil Pollution Emergency Plans.

In any Marine Oil Pollution incident the Controlling Agency should ensure initial response actions as part of a first strike response include:

- Ensuring the safety of personnel, including response personnel.
- Ensuring the safety of the community.
- Controlling and/or Stabilising the Source or Casualty and minimising actual or potential spillage of oil into the marine environment.
- Containing any oil that does enter the marine environment to minimise impacts and aid recovery.
- Apprising actual/potential impacts of incident to inform subsequent ongoing response actions.

State Facilitated First Strike

Where a port, maritime facility or offshore petroleum activity does not exist and a Marine Oil Pollution incident occurs, there is still a requirement to facilitate first strike actions where feasible. The Department of Transport as the Hazard Management Agency for Marine Oil Pollution in WA will facilitate this.

The Department of Transport holds and has access to small and dispersed quantities of first strike response capability in WA, however this is limited to equipment capability centred in Fremantle, WA and personnel capability centred upon available members of the Maritime Environmental Emergency Response Team or Marine and Regional Officers from the Department of Transport throughout WA.

State first strike capabilities can be activated by the Maritime Environmental Emergency Response Duty Officer with approval from the Manager Maritime Environmental Emergency Response, to facilitate first strike response for Marine Oil Pollution incidents where no other established first strike arrangements exist.

Initial Assessment and Monitoring

In addition to the above first strike capability, for any MOP incident, the Department of Transport has the capacity to immediately facilitate initial assessment and monitoring of an incident through prepositioned and established assessment and monitoring capability in WA, including:

- Satellite Tracking Buoy.
- Oil Sample Kit.
- Department of Transport Maritime Environmental Emergency Response Liaison Officer.

The Department of Transport can also quickly facilitate access to National Plan assessment capability, including the conduct of Oil Spill Trajectory Modelling.

Initial assessment and monitoring capabilities can be activated by the Maritime Environmental Emergency Response Duty Officer with approval from the Manager Maritime Environmental Emergency Response to facilitate initial assessment and monitoring for any Marine Oil Pollution incidents in WA.

Contents

1. INTRODUCTION	12
1.1. Aim	12
1.2. Objectives	12
1.3. Scope	12
1.4. Related Documents	13
2. HAZARD SUMMARY	14
2.1. Key Locations	14
2.1.1. State Waters	14
2.1.2. Port Waters	16
2.1.3. Ports	17
2.1.4. Other Maritime Facilities	18
2.1.5. Shipping Lanes and Seaways	18
2.1.6. Offshore Petroleum Activities	18
2.1.7. Marine Parks and Reserves	18
2.1.8. Emergency Management Districts	20
2.2. Incident Risks Locations	21
2.2.1. Ports and Shipping Industry	21
2.2.2. Offshore Petroleum Industry	21
2.2.3. Maritime Facilities, Recreational Boating and Domestic Commercial Vessels	22
2.2.4. Potential Spill Types	22
2.2.5. Possible Causes of a MOP Incident	22
2.2.6. Worst Case Spill Scenarios	23
2.2.7. Maximum Credible Spill Scenarios	23
2.2.8. WA Marine Oil Pollution Risk Assessment	24
3. ACTIVATION	25
3.1. Reporting	25
3.2. Incident Appraisal	25
3.2.1. Controlling Agency	25
3.2.2. Incident Level	26
3.2.3. Incident Source	28
3.3. Notification	28
3.4. Contingency Plans	29
3.5. Resource Activation Guide	29
4. CONTROL	31
4.1. Jurisdictional Authority	32
4.1.1. State Marine Pollution Coordinator	32
4.1.2. Recognition of Controlling Agency and Incident Controller	32
4.1.3. Confirmation of Incident Level Declaration	33
4.1.4. DoT Liaison Officer	33

4.1.5.	Maritime Environmental Emergency Coordination Centre	33
4.1.6.	Joint Strategic Coordination Committee	34
4.1.7.	Emergency Declarations	34
4.2.	Controlling Agency	35
4.2.1.	Incident Controller	35
4.2.2.	Incident Level Assessment and Declaration	36
4.2.3.	Strategic Control Priorities.....	36
4.2.4.	Response Objectives	37
4.2.5.	OPEP/OSCP Implementation.....	37
4.2.6.	Incident Control Centre	37
4.2.7.	Incident Management Team.....	38
4.2.8.	Controlling Agency Transfer.....	39
4.3.	Key Functional Responsibilities	39
5.	MOBILISATION	41
5.1.	Stockpiles.....	41
5.1.1.	State Response Equipment Stockpiles.....	41
5.1.2.	National Plan Stockpiles.....	42
5.1.3.	Industry Stockpiles	42
5.2.	Resource Mobilisation	43
5.2.1.	Personnel Mobilisation	45
5.2.2.	Equipment Mobilisation	45
5.3.	Registrations and Inductions	46
5.4.	Establishing Operations	46
5.4.1.	Forward Operating Base	46
5.4.2.	Staging Areas.....	47
5.4.3.	Coordination Areas (Divisions, Sectors and Segments)	47
5.4.4.	Site Management (Hot, Warm and Cold).....	48
5.4.5.	Site Security Arrangements.....	49
6.	OPERATIONAL CONSIDERATIONS	50
6.1.	Met-Ocean Conditions.....	50
6.2.	Oil Characteristics	52
6.3.	Location and Timeframe.....	52
7.	RESPONSE OPTIONS.....	54
7.1.	Source Control	54
7.1.1.	Vessel Based Source Control.....	54
7.1.2.	Offshore Petroleum Activity Based Source Control.....	54
7.2.	Monitor and Evaluate	55
7.2.1.	Vessel Surveillance	55
7.2.2.	Aerial Surveillance.....	56
7.2.3.	Shoreline Observations	56
7.2.4.	Tracking Buoys	56
7.2.5.	Satellite Imagery or Remote Sensing	57

7.2.6.	Initial Oil Characterisation.....	57
7.2.7.	Water Quality Monitoring.....	57
7.3.	Information and Warnings Management.....	58
7.4.	Natural Recovery	59
7.4.1.	Agitation	59
7.5.	Chemical Dispersants	59
7.5.1.	Aerial Dispersant Application.....	60
7.5.2.	Vessel Dispersant Application	60
7.5.3.	Sub-sea Dispersant Injection.....	61
7.6.	Containment and Recovery.....	61
7.6.1.	Containment Booming.....	62
7.6.2.	Mechanical Recovery	62
7.6.3.	Sorbents.....	63
7.6.4.	Other Systems	63
7.7.	Protection and Deflection	64
7.7.1.	Protection and Deflection Booming	65
7.7.2.	Other Techniques.....	66
7.8.	Shoreline Response	67
7.8.1.	Shoreline Assessment.....	67
7.8.2.	Shoreline Clean-up.....	68
7.9.	Oiled Wildlife Response	70
7.9.1.	Oiled Wildlife Advisor and Wildlife Response Coordinator.....	71
7.9.2.	Oiled Wildlife Field Processing Facility and Primary Care Facility.....	71
7.10.	Cultural and Heritage Management.....	71
7.10.1.	Consultation	73
7.11.	Waste Management	73
7.11.1.	Waste Advisor	74
7.11.2.	Collection	74
7.11.3.	Transportation and Transfers	75
7.11.4.	Temporary Storage	76
7.11.5.	Treatment and Disposal	77
7.12.	Simultaneous Management of Other Hazards	78
7.12.1.	Maritime Casualty Coordination.....	79
8.	RESPONSE CAPABILITY	80
8.1.	State Resources.....	80
8.1.1.	MEER Team.....	80
8.1.2.	Maritime Incident Management Team	80
8.1.3.	State Response Team.....	80
8.1.4.	State Response Equipment.....	81
8.1.5.	DWER Pollution Response Team.....	81
8.1.6.	Oiled Wildlife Response	81
8.1.7.	Air Observer / Air Attack Supervisor	82

8.2.	National Resources	82
8.2.1.	National Response Team	82
8.2.2.	National Plan Equipment	82
8.2.3.	Fixed Wing Aerial Dispersant Capability	83
8.3.	Industry Resources	83
8.4.	Volunteers, Labour Hire and Contractors/Contracts	84
8.4.1.	Volunteer Management	84
8.4.2.	Labour Hire Arrangements	84
8.4.3.	Contractors and Contracted Capability	85
9.	SUPPORT ARRANGEMENTS	86
9.1.	State Capabilities	86
9.1.1.	Incident Management Team Advisors	86
9.1.2.	Operations Coordinators and Staging Coordinators	86
9.1.3.	Incident Support Group	87
9.1.4.	Environmental Liaison Group	87
9.1.5.	Oiled Wildlife Advisor	87
9.1.6.	Operational Area Support Group	88
9.1.7.	Public Information Management	88
9.1.8.	Emergency Relief and Support Management	89
9.1.9.	State Emergency Coordinator and State Emergency Coordination Group	89
9.1.10.	Funding Support	89
9.2.	National Capabilities	90
9.2.1.	Incident Control Advisors	90
9.2.2.	Environmental, Scientific and Technical Network	90
9.3.	Analysis and Decision Support Tools	91
9.3.1.	Oil Spill Trajectory Models and Automated Data Inquiry for Oil Spills	91
9.3.2.	Oil Spill Response Atlas	91
9.3.3.	Net Environmental Benefit Analysis/Spill Impact Mitigation Assessment	91
9.3.4.	PESTLEO Assessment	92
9.3.5.	Geographic Information Systems and Common Operating Picture	92
9.3.6.	Dispersant Consent Framework	92
9.3.7.	Response Phase Monitoring	93
10.	ARRANGEMENTS FOR OTHER RELATED HAZARDS	94
10.1.	Management of Multiple Consequential Hazards	94
10.2.	Marine Transport Emergency	94
10.3.	Hazardous Materials Emergency	95
10.4.	Vessel or Maritime Facility Fire	95
10.5.	Marine Search and Rescue	96
10.6.	Other Hazards	96
11.	MOP INCIDENT MANAGEMENT SYSTEM	98

11.1.	Approach.....	98
11.2.	Structure	98
11.3.	Roles and Responsibilities	99
11.4.	Management Processes.....	99
11.4.1.	Initial Response and Proactive Planning Approach	99
11.4.2.	Incident Action Plans and Field Task Assignments.....	100
11.5.	Further Information.....	100
12.	MOP SAFETY MANAGEMENT SYSTEM	101
12.1.	Approach.....	101
12.2.	Application	101
12.3.	Key Safety Rules.....	101
12.4.	Air Safety Monitoring.....	102
13.	RESPONSE TERMINATION	103
13.1.	Responsibility for Termination	103
13.2.	End Point Criteria	103
13.3.	Demobilisation.....	103
13.3.1.	Personnel Demobilisation.....	105
13.3.2.	Equipment Demobilisation.....	105
13.4.	Initial Recovery Coordination.....	106
13.4.1.	Recovery Coordinator	106
13.4.2.	Impact Statement	106
13.4.3.	Handover to Recovery Coordination Committee(s).....	107
13.5.	Scientific Monitoring	107
13.6.	Investigations and Reporting	108
13.7.	Lessons Management and Reviews.....	108
13.8.	Cost Recovery.....	109
13.9.	Third Party Claims Management	109
13.10.	Waste Disposal and/or Remediation/Treatment	110
14.	REFERENCES	111
14.1.	Acronyms.....	111
14.2.	Glossary.....	115
14.3.	References.....	122

List of Figures

Figure 1: Maritime Environmental Emergency Response Duty Officer Process (DoT, 2023)	3
Figure 2: Maritime Zones (GIA, 2023).....	14
Figure 3: Maritime Zones related to Maritime Features (GIA, 2023)	14
Figure 4: State Waters of WA (DoT, 2023)	15
Figure 5: Port Waters of WA (DoT, 2023)	16
Figure 6: Ports of WA (DoT, 2023)	17
Figure 7: WA Marine Parks and Reserves (DBCA, 2023).....	19
Figure 8: WA Emergency Management Districts (SEMC, 2023)	20
Figure 9: MOP Control Structure	31
Figure 10: Mobilisation Flowchart	43
Figure 11: Mobilisation Map (DoT, 2023).....	44
Figure 12: Coordination areas diagram (DoT, 2023).....	48
Figure 13: Site management diagram (DoT, 2023).....	49
Figure 14: Tidal Zones (DoT, 2023).....	50
Figure 15: Weathering of Oil (DoT, 2023).....	52
Figure 16: MEER IMS Structure (DoT, 2023).....	98
Figure 17: MEER IMS Planning Cycle (DoT, 2023)	99
Figure 18: Equipment and Personnel Demobilisation Flowchart	104

List of Tables

Table 1: Potential spill scenarios (AMSA, 2015).....	23
Table 2: Effect of oil tanker size on maximum credible spill volumes (AMSA, 2015)	24
Table 3: MOP Controlling Agency Arrangements (SHP-MEE, 2023).....	26
Table 4: MOP Incident Level Characteristics (SHP-MEE, 2023)	27
Table 5: MOP Incident Source Types (DoT, 2023).....	28
Table 6: Resource Activation Guide (DoT, 2023).....	29
Table 7: Beaufort Wind Scale (BoM, 2023)	51
Table 8: Response Options by Time and Location (DoT, 2023)	53
Table 9: Operational Constraints for Containment and Recovery (DoT, 2023).....	61
Table 10: Maximum boom deployment angles to flow direction for current strength to prevent escape of oil (ITOPF, 2023).....	64
Table 11: Maximum boom deployment angles to flow direction for current strength to prevent escape of oil (ITOPF, 2023).....	69
Table 12: Recommended Segregation of Waste during an MOP (DoT, 2023)	75
Table 13: Waste Disposal Options (DoT, 2023)	77
Table 14: Key Acronyms List	111
Table 15: Glossary of Key Terms.....	115

1. Introduction

This section outlines the overall applicability and purpose of this Incident Management Plan (IMP).

1.1. Aim

This document aims to provide the Department of Transport (DoT) as the Hazard Management Agency (HMA) for MOP with an IMP that outlines the procedures and arrangements for responding to MOP incidents occurring within or impacting WA State Waters (inclusive of Port Waters) in accordance with the requirements of the State Hazard Plan – Maritime Environmental Emergencies (SHP-MEE), arrangements outlined in the National Plan for Maritime Environmental Emergencies (National Plan) and arrangements outlined in the State Emergency Management (EM) Framework.

1.2. Objectives

This IMP is designed to provide operational and strategic guidance for the coordination and control of MOP incidents within WA, where DoT is the HMA and Jurisdictional Authority (JA) and whether DoT is also the Controlling Agency (CA) or not. As part of this, this IMP seeks to:

- Define the operational roles and responsibilities for responding to a MOP incident in WA.
- Provide guidance for coordinating and controlling MOP response activities in WA.
- Apply WA State ME Framework policy, plans, procedures, and guidelines where relevant.
- Outline procedures for mobilising State resources and integrating national resources to support a MOP incident in WA.
- Incorporate the application of National Plan and cross jurisdictional coordination arrangements for incidents impacting WA.
- Integrate the use of location/activity specific Oil Spill Contingency Plans (OSCP) and Oil Pollution Emergency Plans (OPEP) as relevant to specific MOP incidents.
- Outline response strategies for MOP incidents and key procedures required to be applied.

1.3. Scope

This IMP applies to all actual or impending MOP incidents occurring within or impacting WA State Waters (inclusive of Port Waters). This IMP is applicable to the response phase of hazard management only. Intended users of this plan are DoT and any third parties acting on behalf of DoT in its role as a HMA or JA. This plan also provides awareness for any CA or agency with functional responsibilities for MOP incidents in WA of the incident management arrangements that apply in WA.

This IMP does not intend to duplicate arrangements outlined in the SHP-MEE or National Plan and should be read in conjunction with those plans. It is for this reason that overarching DoT arrangements beyond response are not detailed in this IMP.

1.4. Related Documents

This IMP should be read in conjunction with the following key related documents:

- State Emergency Management Plan
- State Hazard Plan – Maritime Environmental Emergencies
- National Plan for Maritime Environmental Emergencies
- Incident Management Plan – Marine Transport Emergencies
- Any relevant location/activity specific OSCP or OPEP

2. Hazard Summary

This section outlines the general context for the risk of MOP as a prescribed hazard in WA and key locations relevant to the understanding of the risk.

2.1. Key Locations

2.1.1. State Waters

This IMP relates to all MOP incidents occurring within or impacting WA State Waters, which is the coastal waters band as defined by the Offshore Constitutional Settlement (OCS) and the *Coastal Water (State Powers) Act 1980*. Coastal Waters is a belt of water between the limits of the States and a line 3 Nautical Miles seaward of the “Territorial Sea Baseline (TSB)”.

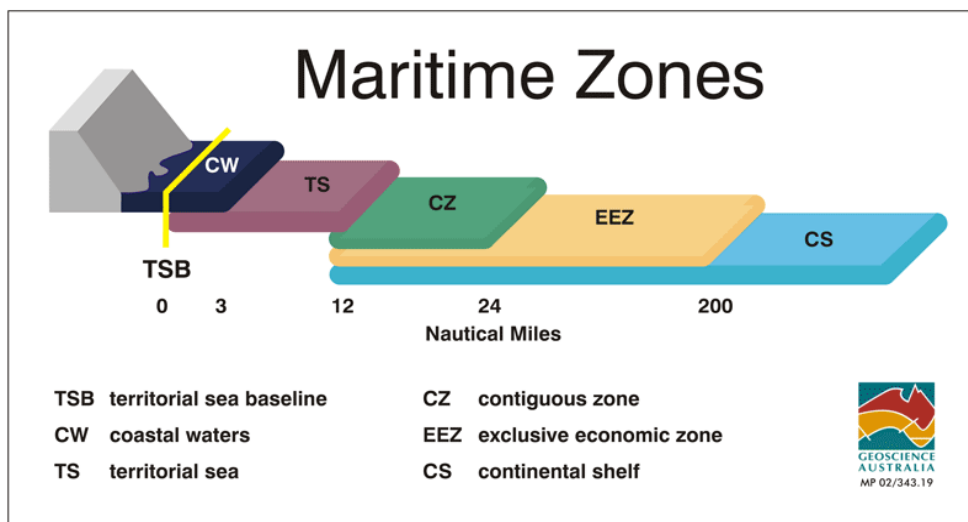


Figure 2: Maritime Zones (GIA, 2023)

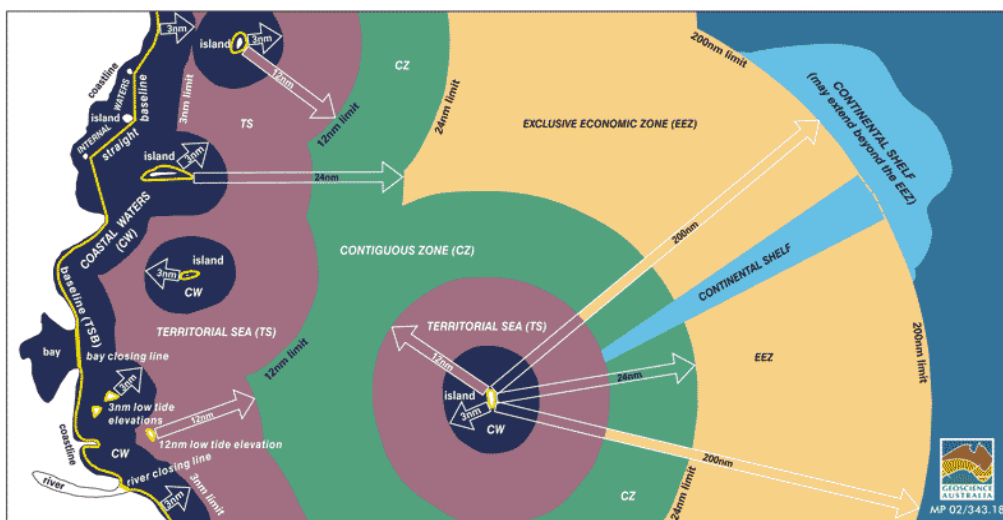


Figure 3: Maritime Zones related to Maritime Features (GIA, 2023)



Figure 4: State Waters of WA (DoT, 2023)

2.1.2. Port Waters

This IMP also relates to all MOP incidents occurring within or impacting Port Waters within WA, which are the proclaimed waters as outlined under the *Port Authorities Act 1999* and *Shipping and Pilotage Act 1967* and associated regulations.



Figure 5: Port Waters of WA (DoT, 2023)

2.1.3. Ports

MOP Incidents in WA may occur within or impact the various Ports that exist along WA’s coastline. These are areas where shipping and marine activity is concentrated and thus where the risks of MOP incidents occurring are increased. The Ports in WA include ports administered by a Port Authority or ports administered by DoT as a Port Operator.

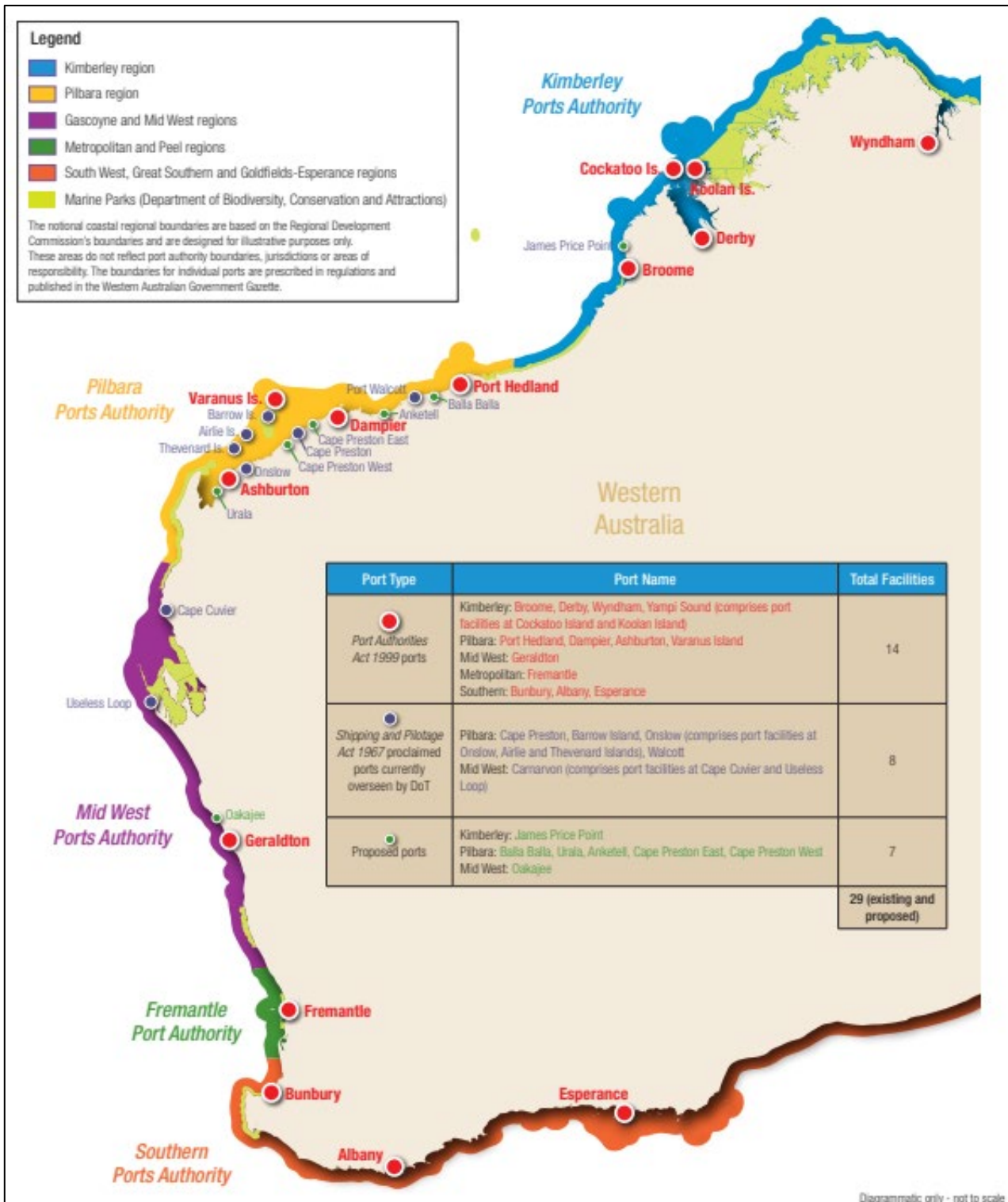


Figure 6: Ports of WA (DoT, 2023)

2.1.4. Other Maritime Facilities

MOP Incidents in WA may occur within or impact the various other Maritime Facilities (including Marinas and Harbours) that exist along WA's coastline. These include facilities that are managed by DoT, other Government Agencies (including Department of Defence) and private facilities. Other Maritime Facilities exist all across the coast of WA, primarily located around populated areas and ranging as far north as Wyndham in the North to Esperance in the South.

2.1.5. Shipping Lanes and Seaways

MOP Incidents in WA may occur from shipping activity either in transit to and from or not even associated with specific ports in WA. Shipping activity occurs all across the coast of WA, including vessels that are simply transiting past the WA coastline in transit to or from non-WA ports.

2.1.6. Offshore Petroleum Activities

MOP Incidents in WA may occur from Offshore Petroleum Activities (inclusive of pipelines), including activities both in WA State Waters and in Commonwealth waters (that can impact State Waters). Most Offshore Petroleum Activities in or near WA are centred around the North West or the Carnarvon Basin, Browse Basin, and Bonaparte Basin.

2.1.7. Marine Parks and Reserves

MOP Incidents in WA may have a significant impact if they occur in or near Marine Parks and Reserves, and other types of Marine Protected Areas. In WA, these are managed by the Department of Biodiversity, Conservation and Attractions (DBCA) and the Department of Primary Industries and Regional Development (DPIRD).

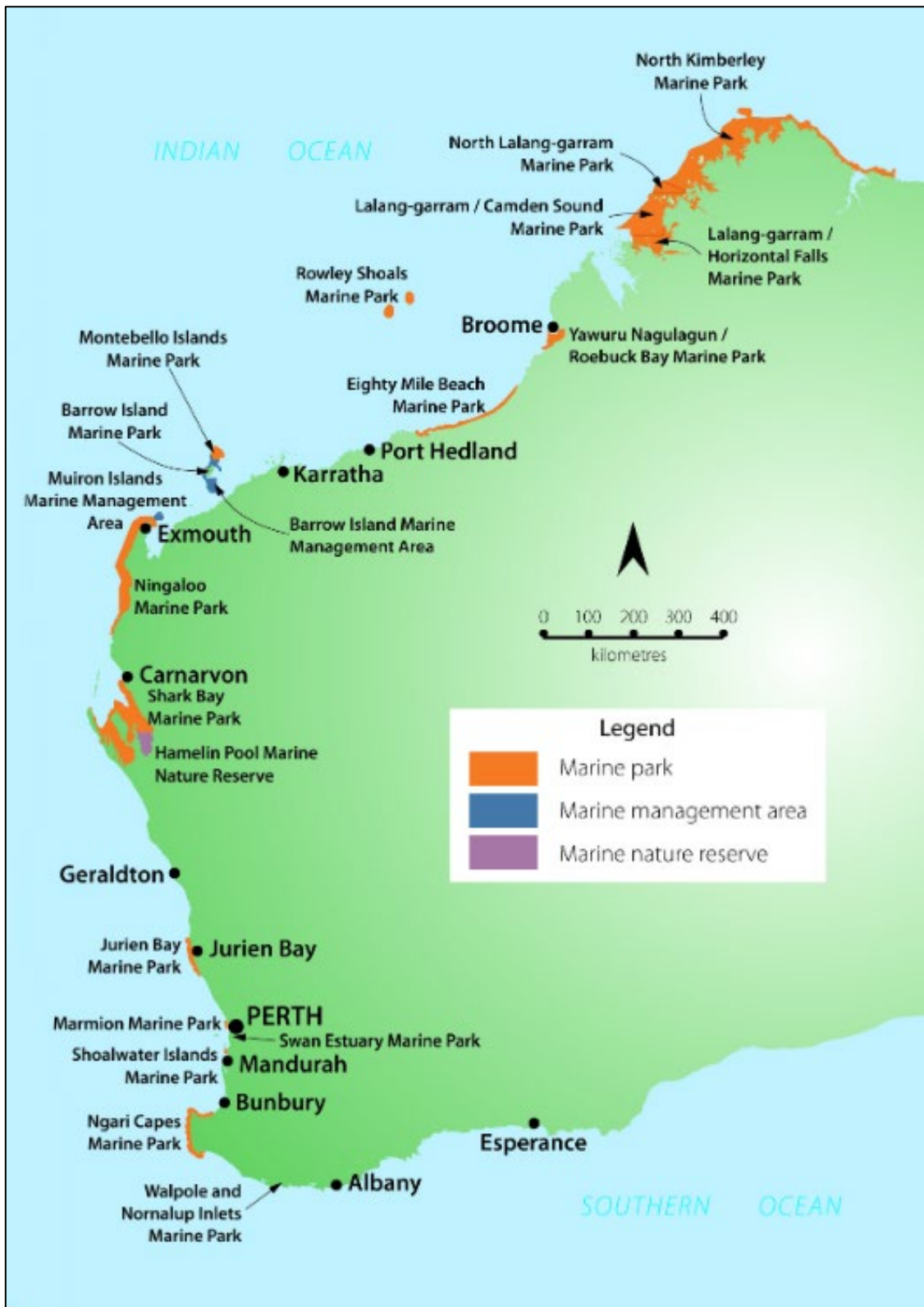


Figure 7: WA Marine Parks and Reserves (DBCA, 2023)

2.1.8. Emergency Management Districts

As part of the State EM Framework in WA, the State Emergency Management Committee (SEMC) define emergency management districts. This is done, to assist in the provision of operational and strategic guidance for the coordination and control of effective response to an incident occurring within each district.

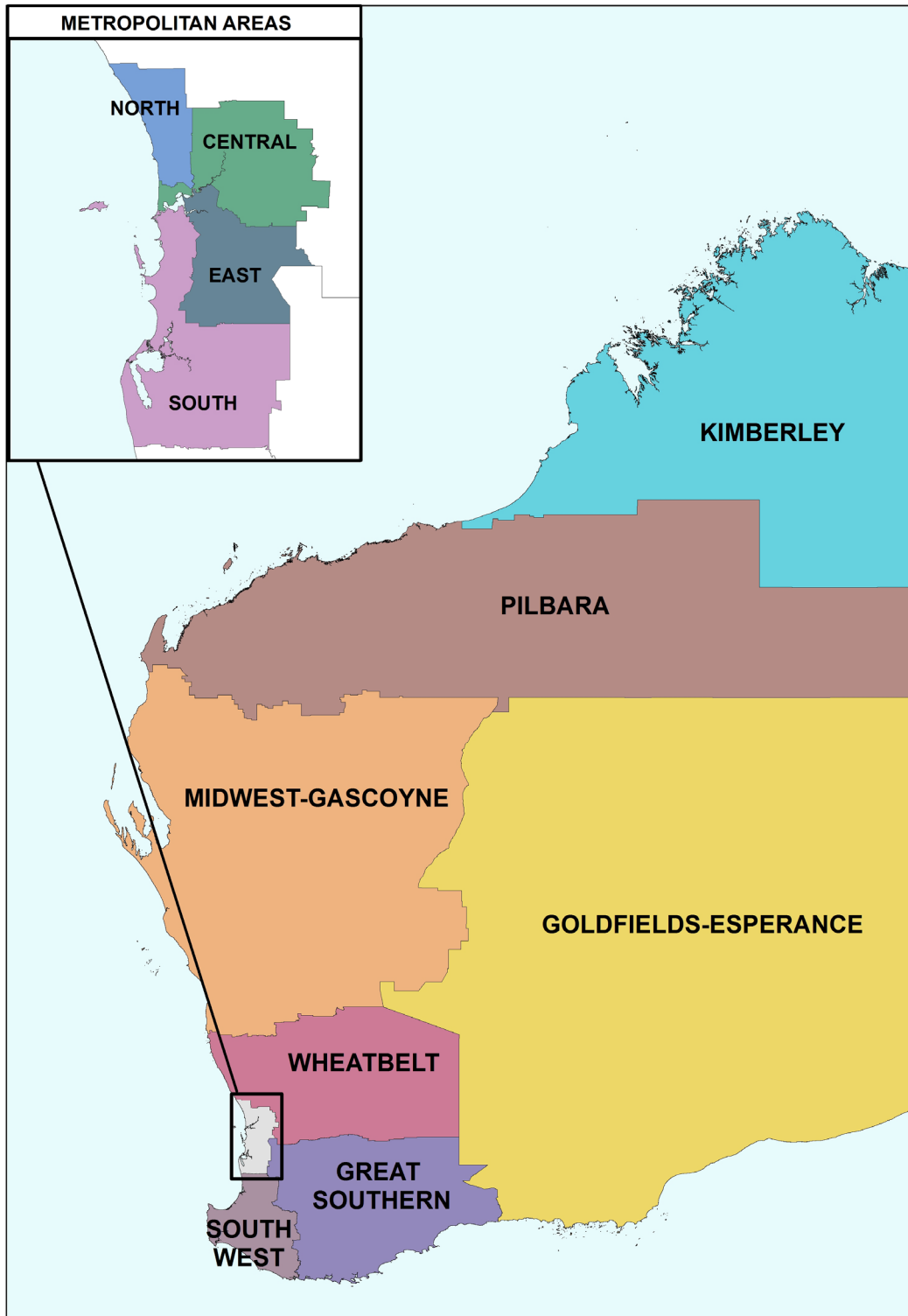


Figure 8: WA Emergency Management Districts (SEMC, 2023)

2.2. Incident Risks Locations

2.2.1. Ports and Shipping Industry

WA is home to thirteen ports under five Port Authorities proclaimed pursuant to the *Port Authorities Act 1999* and five ports proclaimed pursuant to the *Shipping and Pilotage Act 1967* (Figure 6). In the 2021/2022 financial year there were 9,416 calls of ships involved in coastal or international voyages to WA ports alone (BITRE, 2022) undertaking import and export activities which contributed to ~31% of port calls to Australia as a whole.

Ports within WA receive a wide range of ships such as:

- Bulk carriers
- Chemical tankers
- Container carriers
- Gas carriers
- General cargo/multipurpose carriers
- Livestock carriers
- Oil tankers.
- Vehicle carriers

Most ships that enter WA State waters are foreign flagged. All ships carry hydrocarbons as fuel, and some will carry even more significant volumes onboard such as gas carriers and oil tankers transporting this product as cargo. In addition to large ships, port operations are supported by a range of smaller vessels that undertake activities such as line handling, pilotage, dredging and general maintenance.

2.2.2. Offshore Petroleum Industry

The North-West of WA, in particular, is home to a large offshore petroleum industry. These activities occur in both Commonwealth and WA State waters, and while offshore petroleum activities can occur in other locations within WA State waters (and adjacent Commonwealth waters), the biggest concentration is located in this region. Offshore petroleum activities (and their associated infrastructure) that occur in and near to WA State waters include:

- Seismic surveys
- Exploration drilling
- Operations and production (including floating production storage and offloading facilities)
- Pipelines
- Care and maintenance.
- Plug and abandonment.

These offshore petroleum activities not only bring hydrocarbons from below the seabed to the ocean surface, but they are also supported by numerous vessels and ships transiting to and from these locations.

2.2.3. Maritime Facilities, Recreational Boating and Domestic Commercial Vessels

WA has an extensive number of Maritime Facilities (e.g. refuelling jetties), recreational boats (e.g. fuel spillages), and Domestic Commercial Vessels involved in other maritime industries (e.g. fishing or tourism). These facilities and vessels also hold or carry hydrocarbons as fuel however usually in smaller volumes.

2.2.4. Potential Spill Types

Given the variety of activities occurring as detailed above, there is a range of potential pollutants that could cause a MOP incident to occur. These included, but are not limited to:

- Ports & Shipping
 - Heavy fuel oil (HFO)
 - Intermediate fuel oil (IFO)
 - Marine diesel oil (MDO)
 - Lubricant and engine oils
- Offshore Petroleum Industry
 - Crude oil
 - Condensate
 - Natural gas
- Maritime Facilities, Recreational Boating and Domestic Commercial Vessels
 - Marine diesel oil (MDO)
 - Petrol
 - Lubricant and engine oils

It should be noted that there are often crossovers between pollutants associated with ports & shipping and those associated with the offshore petroleum industry as many aspects of these two industries assist each other. For example, vessels working to support an offshore oil platform or ships transporting natural gas.

2.2.5. Possible Causes of a MOP Incident

Given the extent of the areas and activities that this IMP covers, MOP incidents could arise from a wide variety of sources. Table 1 below outlines potential scenarios which could occur within or impact WA State Waters and lead to an MOP incident.

Table 1: Potential spill scenarios (AMSA, 2015)

Incident Type	General Shipping	Ports & Port Facilities	Oil Loading & Offloading Facilities	Offshore Exploration	Offshore Production
Vessel – Collision	Yes	Yes	Yes	Yes	Yes
Vessel – Grounding	Yes	Yes	Yes	Yes	Yes
Vessel – Transfer/Bunkering	Yes	Yes	Dep	Yes	Yes
Vessel – Tanker Loading/Offloading	N/A	N/A	Yes	N/A	Dep
Pipeline Failure	N/A	N/A	Dep	N/A	Yes
Structural Failure	Yes	N/A	Yes	Yes	Yes
Surface Blowout	N/A	N/A	N/A	Yes	Yes
Subsurface Blowout	N/A	N/A	N/A	Yes	Yes

Yes – Incident scenario for the facility or operation.
 Dep – Incident scenario dependant on the nature of the facility or operation.
 N/A – Not usually relevant to the facility or operation.

2.2.6. Worst Case Spill Scenarios

The worst-case spill that is considered possible to occur within WA State Waters has been considered for both the Ports & Shipping Industry and the Offshore Petroleum Industry as these introduce the biggest MOP risk to the State.

The worst-case spill that could arise from a port or shipping activity would be the complete loss of all fuel and cargo tanks from the largest oil tanker ship carrying a HFO.

The worst-Case Spill that could arise from an offshore petroleum activity would be an uncontrolled well blowout resulting in a continuous release of a crude oil or condensate for several months. The volumes of this would be in the magnitude of greater than 100,000 m³ of pollutant. Whilst crude oils are considered to be more persistent than condensates, condensates can be higher in their toxicity to marine life and thus both are considered here in regard to risk to the State.

2.2.7. Maximum Credible Spill Scenarios

The maximum credible spill scenario is less useful for preparedness purposes given the range of activities and the vastness of the area that is covered by this IMP and that the State is required to be prepared to respond to all MOP incidents.

However, if a ship-based incident were to occur, in lieu of more accurate information DoT will look to the AMSA guidelines regarding the effect of oil tanker size on maximum credible spill volumes. Table 2 below outlines these for reference.

Table 2: Effect of oil tanker size on maximum credible spill volumes (AMSA, 2015)

Vessel Tonnage (DWT)	Major Incident Grounding with Rupture (Two Wing Tanks + One Centre Tank) (tonnes)	Non-Major Incident Slight Grounding or Collision (One Wing Tank) (tonnes)	Fuel Oil (tonnes)
30000	3000	700	450
50000	5000	1000	750
70000	12000	3000	1800
100000	21000	5500	2300
200000	45000	10500	2750
240000	60000	15000	4000

2.2.8. WA Marine Oil Pollution Risk Assessment

In order to understand the State's marine oil spill risk profile, the DoT has conducted a State-wide marine oil pollution risk assessment. The results of the project are used to prevent, prepare, respond, and recover from a marine oil pollution incident. Results for the project are available from the WAMOPRA web map application available via the DoT Maritime Website. The risk assessment was comprised of two components:

- Evaluating protection priorities of the receiving environment in order to assess potential consequences of marine oil pollution, and
- Assessing the likelihood, size, location, and type of marine oil pollution.

3. Activation

This section outlines the reporting and notification requirements to commence a response to a MOP incident in WA, and to initiate the application of this plan to support the management of a response.

3.1. Reporting

The WA IMP for MOP (This Plan) is activated once the DoT Maritime Environmental Emergency Response (MEER) Unit has received notification of an actual or impending event that is or may impact WA State Waters (inclusive of Port Waters), and this notification has been appraised by the DoT MEER Duty Officer as an actual or impending MOP incident.

The definition of MOP as prescribed in the Emergency Management Regulations r. 15(j)) is:

Actual or impending spillage, release or escape of oil or an oily mixture that is capable of causing loss of life, injury to a person or damage to the health of a person, property, or the environment.

Anyone wishing to report an actual or impending MOP incident that is or may impact WA State Waters (inclusive of Port Waters), should contact the MEER Duty Officer via **08 9480 9924**.

3.2. Incident Appraisal

To aid in the management of MOP incidents they are appraised and managed relative to the CA arrangements, incident level assessment and source for any given incident.

3.2.1. Controlling Agency

CA arrangements as outlined in the SHP-MEE are defined by the waters from where an incident initially occurs. Only DoT or a Port Authority can be a CA for a MOP incident in WA State Waters (inclusive of Port Waters). Table 3 below outlines the CA arrangements for MOP incidents.

Table 3: MOP Controlling Agency Arrangements (SHP-MEE, 2023)

Location [Table note 1]	Hazard Management Agency / Jurisdictional Authority	Controlling Agency [Table note 2]
State Waters Coastal Water (State Powers) Act 1980	DoT	DoT [Table note 3]
Port Authority Port Waters Port Authorities Act 1999	DoT	Port Authority [Table note 4]
Shipping and Pilotage Port Waters Shipping and Pilotage Act 1967	DoT	DoT (Port Operator) [Table note 5]

Table note 1: For control arrangements pertaining to Australian Government Waters, refer to the National Plan for Maritime Environmental Emergencies (National Plan). AMSA may request that DoT manage an MOP incident in Australian Government waters.

Table note 2: The Controlling Agency remains true to the incident initial location. If a Maritime Environmental Emergency crosses over defined waters boundaries, the Controlling Agency will remain with the original nominated agency or organisation unless otherwise appointed through agreement between the Hazard Management Agency / Jurisdictional Authority of both waters. Note that:

- In the event of a MOP incident resulting from an Offshore Petroleum Activity in Australian Government waters that impacts State waters, the role of Controlling Agency will be performed by DoT for response activities in State waters (See Offshore Petroleum Industry Guidance Note for further details). NOPSEMA is the regulatory agency for Offshore Petroleum Activities in Australian Government waters and have the responsibility to approve an OPEP and to administer their relevant legislation. Petroleum Titleholders are to ensure they are compliant with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009, Reg 14 (8AA), (a), (b), (c) (d).

Table note 3: A level 1 incident may be managed under existing Waterways Safety Management protocols or Maritime Facility procedures. Decision to appoint an Incident Controller and nominate a Controlling Agency will be based on the nature of the incident. Note that:

- DMIRS is the Regulatory Agency for Offshore Petroleum Activities in State waters and have the responsibility to approve an OPEP and to administer their relevant legislation. DoT remains the HMA for MOP incidents resulting from an Offshore Petroleum Activity in State waters.

Table note 4: For any incident originating in PAA port waters, the relevant Port Authority will be the primary option to be Controlling Agency, unless for Level 2 and 3 incidents it is deemed by the Hazard Management Agency (through the State Marine Pollution Controller) in consultation with the Port Authority that it is more suitable for DoT to be the Controlling Agency. A Port Authority may assign, through an IMP/OSCP/OPEP, emergency response functions to Maritime Facility Operators for incidents originating from their activities, however the role of Controlling Agency will either the Port Authority or DoT as above.

Table note 5: DoT may assign, through an IMP/OSCP, emergency response functions to Maritime Facility Operators for incidents originating from their activities, however the role of Controlling Agency will remain with DoT as above.

3.2.2. Incident Level

Incident criteria as outlined in the State Hazard Plan – Maritime Environmental Emergency define the thresholds for which level an incident should be declared. Only a Controlling Agency through their appointed Incident Controller can assess the level of an incident which will then be confirmed by the State Marine Pollution Coordinator. Table 4 below outlines the criteria for incident levels for MOP incidents.

Table 4: MOP Incident Level Characteristics (SHP-MEE, 2023)

Characteristic	Level 1	Level 2	Level 3
Management			
Jurisdiction	Single jurisdiction	Multiple jurisdiction	Multiple jurisdiction
Delegation	Incident Controller responsible for all functions	Some functions delegated or divisions created	All functions delegate and/or divisions created
Number of agencies	First-response agency	Routine multi-agency response	Agencies from across government and industry
Incident Action Plan	Simple/Outline	Outline	Detailed
Resources	Resource from within one area	Requires intra-state resources	Requires national or international resources
Type of Emergency			
Type of response	First-strike	Escalated	Campaign
Duration	Single shift	Multiple shifts Days to weeks	Extended response Weeks to months
Hazards	Single hazard	Single hazard	Multiple hazards
Resources at Risk			
Human	Potential for serious injuries	Potential for loss of life	Potential for multiple loss of life
Environment	Isolated impacts or with natural recovery expected within weeks	Significant impacts and recovery may take months. Remediation required	Significant area and recovery may take months. Remediation required
Wildlife	Individual fauna	Groups of fauna or threatened fauna	Large numbers of fauna
Economy	Business level disruption	Business failure	Disruption to a sector
Social	Reduced services	Ongoing reduced services	Reduced quality of life
Infrastructure	Short term failure	Medium term failure	Severe impairment
Public Affairs	Local and regional media coverage	National media coverage	International media coverage

3.2.3. Incident Source

Incident source is critical to determining who might have functional responsibilities as part of the response to an MOP incident. Table 5 below outlines the differing possible sources of a MOP incident and their relevant definitions.

Table 5: MOP Incident Source Types (DoT, 2023)

Source	Definition
Vessel	The occurrence of Marine Oil Pollution from a vessel.
Petroleum Activity	The occurrence of Marine Oil Pollution from operations, works or pipelines as part of a 'Petroleum Activity,' as defined in the Petroleum (Submerged Lands) (Environment) Regulations 2012.
Maritime Facility	The occurrence of Marine Oil Pollution from a wharf, jetty, anchorage, or mooring, used for the process of loading, or unloading of cargo, passengers, stores, equipment, or bunkers within a port.
Unknown/Other	The occurrence of Marine Oil Pollution where the source is not clear, or it is not attributable to a Vessel, Petroleum Activity or Maritime Facility.

3.3. Notification

The State Marine Pollution Coordinator (SMPC) and Manager MEER, both from DoT, are responsible for providing notifications that a MOP incident is occurring and that the IMP-MOP (This Plan) has been activated.

During a Level 1 MOP incident this is achieved through the compilation and distribution of an email by the Manager MEER (or MEER Duty Officer if delegated) as soon as practicable. The email will be sent to the following at a minimum:

- Relevant Controlling Agency if not also DoT (e.g. Port Authority)
- Key marine pollution response staff in DoT (e.g. MEER and Ports Team and Regional Services or Maritime Business Unit Staff as necessary)

During a Level 2/3 MOP incident this is achieved by the SMPC through the compilation and distribution of an Incident Notification Brief (INB) as soon as practicable. The INB will be sent to the following at a minimum:

- Office of the Minister for Transport
- Senior Positions in DoT (Director General, Managing Director, Executive Director Maritime, Senior Communications Officer)
- Key Other Government Agencies (e.g. DBCA – Environment Scientific Coordinator and Duty Wildlife Officer, DWER – Pollution Response, AMSA – Joint Rescue Coordination Centre)
- Relevant Controlling Agency if not also DoT (e.g. Port Authority)
- Relevant Local and District Emergency Coordinators in the incident/impact area
- Key marine pollution response staff in DoT (e.g. MEER and Ports Team and Regional Services Business Unit Staff or Maritime Business Unit Staff as necessary)

- For serious incidents, the INB will also be sent to potential members of an Operational Area Support Group (OASG). Depending on the situation, the SMPC may also follow up the INB with a phone call to provide a more detailed briefing to key individuals.

For a Level 3 MOP incident additional notifications must be provided by the SMPC to the State Emergency Coordinator (SEC), including consultation around

- Requirement for activation of the State Emergency Coordination Group (SECG)
- The potential for declaring an Emergency Situation or recommending that a State of Emergency be declared.

3.4. Contingency Plans

Where relevant, the CA is responsible for ensuring existing specific activity/location contingency plans are activated to guide initial response activities and support ongoing incident management and planning for any MOP incident. Where existing contingency plans do not exist, this IMP can be used independently. Existing plans may include OSCPs, OPEPs, IMPs, First Strike Plans and/or Tactical Response Plans (TRP).

3.5. Resource Activation Guide

For any MOP incident in WA, Table 6 below outlines basic resource activation mechanisms for key response resources.

Table 6: Resource Activation Guide (DoT, 2023)

Resource	Activation Mechanism
MEER Duty Officer	Phone call to DoT MEER 24/7 Reporting Line: 08 9480 9924.
State Marine Pollution Coordinator	Phone call to DoT MEER 24/7 Reporting Line: 08 9480 9924.
DoT Liaison Officer	Phone call to DoT MEER 24/7 Reporting Line: 08 9480 9924.
DoT Incident Control Centre (ICC)	By email (inclusive of INB) from the SMPC or DoT Incident Controller (IC) to Maritime Incident Management Team (MIMT) Members and DoT Maritime Staff, as necessary.
Operational Area Support Group (OASG)	By email (inclusive of INB) from the SMPC to OASG Members/Agencies, as necessary.
Joint Strategic Coordination Committee (JSCC)	By email (inclusive of INB) from the SMPC to JSCC Members/Agencies, as necessary.
Incident Support Group (ISG)	By email (inclusive of SITREP and/or INB) from the IC to ISG Members/Agencies, as necessary.

Resource	Activation Mechanism
Environment Scientific Coordinator (ESC) and Environmental Liaison Group (ELG)	By email (inclusive of INB) from the SMPC to the ESC, followed by activation of the ELG by the ESC, as necessary.
DBCA Oiled Wildlife Advisor	Phone call to DBCA State Duty Officer: 08 9219 9108
Incident Management Team (IMT) Advisors	By request to the SMPC
Operations Coordinators and State/National Resources Staging Coordinators	By request to the SMPC or automatically for a Level 2/3 MOP incident where DoT is not the CA and state/national resources are mobilised.
State Response Team (SRT)	By request to the SMPC when DoT is not the CA, or at the discretion of the DoT IC when DoT is the CA.
State Response Equipment (SRE)	By request to the SMPC when DoT is not the CA, or at the discretion of the DoT IC when DoT is the CA.
Maritime Incident Management Team (MIMT)	At the discretion of the DoT IC when DoT is the CA.
National Plan Resources and Capabilities	By request to the SMPC and as per requirements outlined in the National Plan.

4. Control

This section outlines the arrangements and requirements for establishing control of a MOP incident in WA at both the strategic and operational level. It also outlines key responsibilities for control and response as part of a MOP incident in WA.

In accordance with the *WA Emergency Management Act 2005 (EMA)* and *Emergency Management Regulations 2006 (EMR)*, the DoT Chief Executive Officer (CEO) is the HMA for the hazard of MOP in WA. The HMA has overall responsibility for ensuring there is an adequate response to a MOP incident in WA, to achieve this Figure 9 outlines the control structure, aligned to both National Plan and State EM Framework arrangements, which is applied.

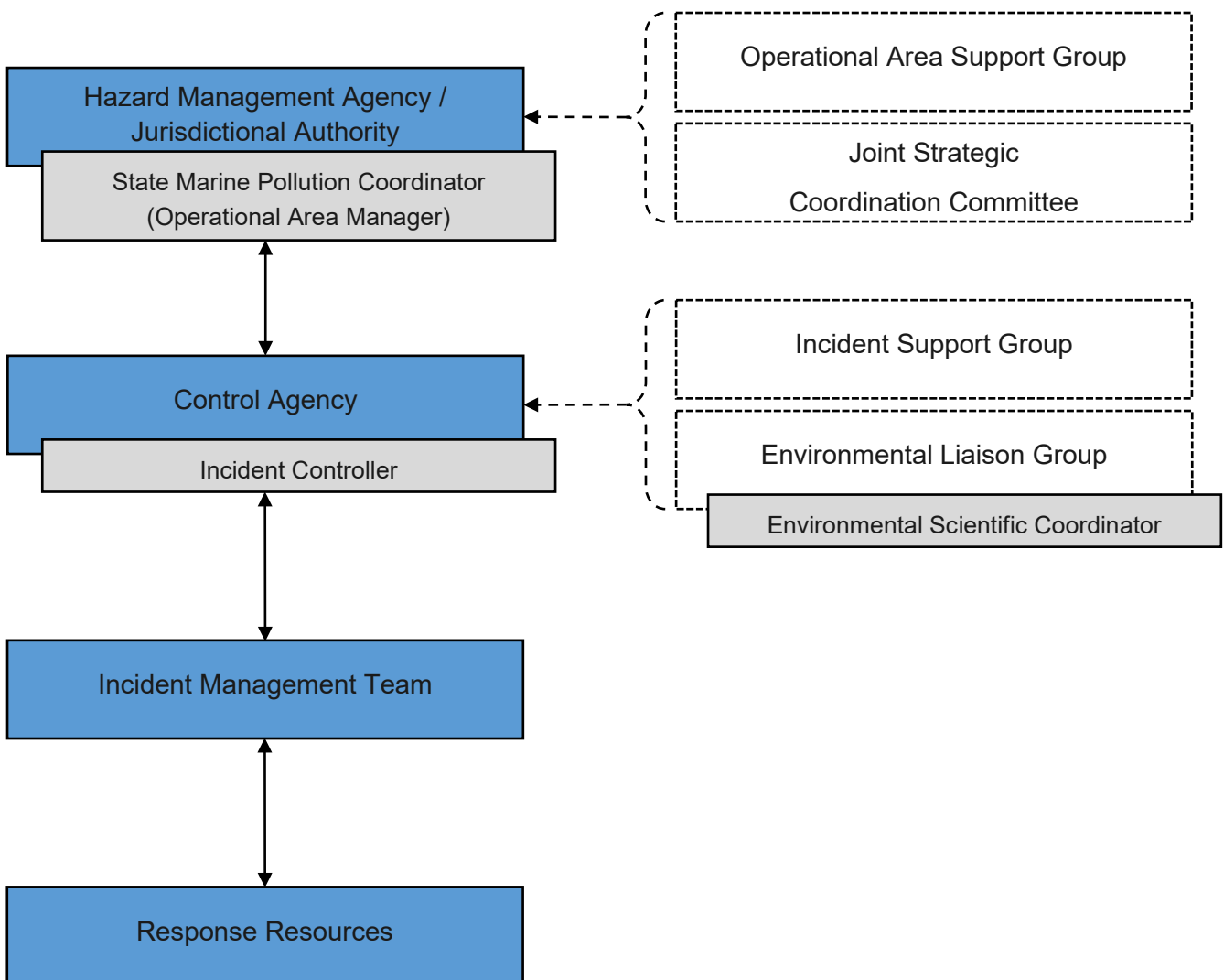


Figure 9: MOP Control Structure

Note: For specific information relating to the management of complex control arrangements in relation to cross jurisdictional or state/port water MOP Incidents, the SHP-MEE, and the Offshore Petroleum Industry Guidance Note (IGN) for MOP Response and Consultation Arrangements or the Ports Guidance Note (PGN) for MOP Response and Consultation Arrangements should be consulted.

4.1. Jurisdictional Authority

The JA is the Agency identified in the National Plan that has the jurisdictional or legislative responsibility to ensure there is adequate prevention of, preparedness for, response to and recovery from a Maritime Environmental Emergency (MEE). In WA for a MOP incident in or impacting State Waters (Inclusive Port Waters) this is always DoT.

Note: See Table 3 for Controlling Agency Arrangements as per SHP-MEE

4.1.1. State Marine Pollution Coordinator

As per requirements outlined in the National Plan and State EM Framework arrangements, the SMPC is a senior government official from DoT who:

- Provides strategic leadership and coordination in support of the CA.
- Is a delegate of the HMA for the hazard of MOP.
- Can perform the role of Operational Area Manager (OAM) where simultaneous hazards are occurring.
- Is the primary 'state spokesperson' for a MOP incident.
- Facilitates state, national, and international assistance through SHP-MEE, National Plan, State EM, and Australian EM arrangements.

Given the role of the SMPC, they will only be recognised in writing by the DoT CEO during a Level 2/3 MOP incident. For all Level 1 MOP incidents, the default SMPC is the person performing the role of Director MEER & Ports in DoT unless otherwise recognised in writing by the DoT CEO.

Note: The SMPC also specifically oversees the establishment of CA Transfer protocols for a Level 2/3 MOP incident originating in Port Waters, where it is deemed by the SMPC that it is more suitable for DoT to be the CA. These protocols, including determination of Port Authority personnel required to support a receiving DoT IMT are outlined in the PGN.

Activation of the SMPC is achieved via notification from the MEER Duty Officer or Manager MEER for any actual or impending MOP incident, as soon as practical once an incident has been identified/reported.

4.1.2. Recognition of Controlling Agency and Incident Controller

During a MOP incident the SMPC is responsible for ensuring clarity in incident control arrangements, aligned to responsibilities outlined in the SHP-MEE. During a Level 2/3 MOP incident the SMPC will formally recognise the CA and IC in writing. This ensures there is no confusion as to the recognised control arrangements for the incident. During a Level 1 MOP incident the SMPC will only formally recognise the CA and IC in writing if the required control arrangements are uncertain or in dispute.

For the recognition of the CA, where cross jurisdiction or simultaneous hazard complications exist, the SMPC will consult with other agencies/authorities as appropriate before recognising the relevant the CA.

For the recognition of the IC, the SMPC will consult with the CA who appoints the IC to confirm they are suitable and competent to undertake the incident control function at a level commensurate with the assessed incident level.

4.1.3. Confirmation of Incident Level Declaration

During a MOP incident the SMPC is responsible for ensuring the incident level is correctly declared, aligned to criteria outlined in the SHP-MEE. Throughout a MOP incident the CA through the IC is required to complete an incident level assessment as soon as practicable upon assuming responsibility for the incident, and regularly reassess the level throughout the incident. The SMPC is required to confirm the incident level assessment made by a CA. During a Level 2/3 MOP incident, this is done in writing through review and confirmation of an Incident Level Declaration made by the IC and provided to the SMPC.

Note: See Table 4 for Incident Level Criteria as per SHP-MEE

4.1.4. DoT Liaison Officer

During a MOP incident, where cross jurisdictional or cross agency collaboration is required the SMPC may appoint a DoT Liaison Officer to mobilise into the other agency/authority incident management structure or request a liaison officer from another agency/authority to mobilise into the DoT incident management structure. The role of a liaison officer is to facilitate effective communications and enhanced situational awareness between DoT and the other agency/authority, and in particular the SMPC and any IC. Where necessary, a DoT Liaison Officer can also assist in the provision of SMPC direction, or support and advice as appropriate. There are trained DoT Liaison Officers in Broome, Karratha, Carnarvon, Geraldton, Fremantle, Albany, and Esperance.

Activation of a DoT Liaison Officer is achieved via email or phone call to the relevant officer from the SMPC or the Maritime Environmental Emergency Coordination Centre (MEECC) as soon as practical once the requirement of a DoT Liaison Officer is identified.

4.1.5. Maritime Environmental Emergency Coordination Centre

During a Level 2/3 MOP incident the SMPC may establish and operate from a MEECC. Where required, an OASG may also be established and located within the MEECC. The exact composition and location of the MEECC will be determined by the SMPC however the default location for the MEECC is the DoT Maritime Office in Fremantle, WA. Where a MEECC is established, communications between the MEECC and an IMT should principally be between the SMPC and the IC.

Activation of the MEECC is achieved via email to required members from the SMPC for any actual or impending MOP incident ahead of any required establishment.

4.1.6. Joint Strategic Coordination Committee

During a MOP incident, which requires significant cross jurisdictional collaboration (e.g. originating in Commonwealth Waters and impacting State Waters), a JSCC will be established by the SMPC to facilitate effective coordination between the two JAs and their respective CAs. The role of the JSCC is to ensure appropriate coordination between the respective IMTs established by multiple CAs. JSCC meetings can either be facilitated in person or virtually.

Note: The JSCC also specifically oversees the establishment of CA Transfer protocols for an MOP incident originating from an Offshore Petroleum Activity that originates in Commonwealth Waters and impacts State Waters (inclusive of Port Waters) and thus where a CA Transfer for the control of the State Waters impact is required. These protocols, including determination of “Lead IMT” designations and Petroleum Titleholder personnel required to support a receiving DoT IMT are outlined in the IGN.

Activation of the JSCC is achieved via email to required authorities/agencies from the SMPC or the MEECC for any actual or impending cross jurisdiction MOP incident, as soon as practical once the cross-jurisdiction component has been identified/reported.

4.1.7. Emergency Declarations

Section 50 of the EMA provides a HMA with the ability to declare, in writing, an “Emergency Situation”. The term “Emergency” means the occurrence or imminent occurrence of a hazard which is of such a nature or magnitude that requires a coordinated response. A declaration of an Emergency Situation has effect from the time of the declaration or from such time as is specified in the declaration and will remain in force for three (3) days, unless extended or revoked. A declaration may only be extended by the SEC under the provisions of section 52 of the EMA. A declaration of an Emergency Situation provides the HMA with additional powers under Part 6 of the EMA, these include:

- Requesting a person to provide personal details.
- Directing or prohibiting movement of persons, animals, vehicles, and closure of waters/roads etc.
- Use of vehicles in certain circumstances.
- Use or control of property, vehicles, and places.
- Directions/quarantine of persons exposed to hazardous substances for certain purposes.
- Disclosure and exchange of personal information.

These powers are executed through people authorised by the SMPC to function as Hazard Management Officers (HMO) during an Emergency Situation declared by the HMA. Authorisation of a HMO may be in relation to a particular Emergency Situation, or any emergency situation declared by the HMA. A HMO is to comply with directions of the SMPC when exercising powers under Part 6 of the EMA.

On behalf of DoT as the HMA for MOP Incidents, the SMPC can declare, in writing, that an Emergency Situation exists in an area or areas of the State for the hazard of MOP. A declaration can only be made if the SMPC is satisfied that certain conditions are met or can be achieved.

In addition to declarations of an “Emergency Situation,” additional provisions are made in the EMA whereby the Minister responsible for the EMA may declare a “State of Emergency” when a situation requires extra powers provided under the EMA. This is unlikely to be required in the case of an MOP incident, however if it were, in order to declare a State of Emergency the Minister must consider the

advice of the SEC and the Minister responsible for the EMA may appoint Authorised Officers to utilise the additional powers available under the EMA during a declared State of Emergency.

The procedures for the management of emergency declarations are outlined in the State Emergency Management Procedure. CAs can make requests to the SMPC to consider the need to declare an “Emergency Situation” and appointment of relevant “HMOs” where deemed necessary. The SMPC can make requests to the SEC to consider the need to declare a “State of Emergency” where deemed necessary.

4.2. Controlling Agency

The CA is the Agency identified in the SHP-MEE that controls the response activities to a specified type of emergency. In WA for a MOP incident in or impacting State Waters (Inclusive of Port Waters) this is either DoT or a Port Authority. The responsibilities for DoT and Port Authorities as CAs stem not only from arrangements outlined in the SHP-MEE by agreement between the HMA and Port Authorities, but also obligations outlined in the *Pollution of Waters by Oil and Noxious Substances Act 1987 (POWBONS)* whereby they are each considered an “Appropriate Authority”.

Given the responsibilities of a CA, their control of an incident will only be recognised in writing by the SMPC during a Level 2/3 MOP incident. During a Level 1 MOP incident the SMPC will only formally recognise a relevant CA in writing if the control arrangements are uncertain or in dispute.

The name of the CA at any given time, and any changes to the Controlling Agency throughout an incident must be recorded in the Incident Log and INBs.

Note: See Table 3 for Controlling Agency Arrangements as per SHP-MEE

4.2.1. Incident Controller

As per requirements outlined in the State Hazard Plan and State EM Framework, the IC is the person designated by the relevant CA, responsible for the overall management and control of all response activities to a MOP incident, including the tasking of other agencies in accordance with the needs of the situation.

The CA is responsible for appointing the IC and ensuring they are suitable and competent to undertake the incident control function at a level commensurate with the assessed incident level.

Given the role of the IC, their appointment by a CA will only be recognised in writing by the SMPC during a Level 2/3 MOP incident. During a Level 1 MOP incident the SMPC will only formally recognise appointment of an IC in writing if the control arrangements are uncertain or in dispute.

If DoT is CA, the default IC for an MOP incident is as follows:

- For all Level 1 MOP incidents, the default IC is the person performing the role of MEER Duty Officer unless otherwise recognised in writing by the Manager MEER.
- For all Level 2/3 MOP incidents, the default IC is the person performing the role of Manager MEER unless otherwise recognised in writing by the SMPC.

The name of the appointed IC at any given time, and any changes to the person who is appointed as the IC throughout an incident must be recorded in the Incident Log and Incident Action Plan (IAP).

Activation of an IC is via notification and appointment from the relevant CA for any MOP incident within their responsibility and as per their specific incident management procedures as soon as notification of an actual or impending event has been received.

Specifically, for DoT as a CA, activation of an IC is achieved automatically (consummate to the assessed incident level) unless advised as otherwise by the Manager MEER or SMPC. This occurs once an actual or impending MOP event has been identified/reported through the MEER 24/7 on call process and the MEER Duty Officer and/or Manager MEER have been notified of the incident.

4.2.2. Incident Level Assessment and Declaration

During a MOP incident the IC is responsible for assessing and declaring the incident level, aligned to the criteria outlined in the SHP-MEE. An initial incident level assessment is required to be completed as soon as practicable upon assuming control for the incident. Subsequent incident level assessments are required to be completed throughout the incident and at a minimum frequency of daily.

During a Level 2/3 MOP incident, incident level assessments and declarations are required to be completed in writing through compilation of an Incident Level Declaration (EM Form 23). During a Level 1 MOP incident, incident level assessments and declarations can be completed in consideration of the Incident Level Criteria as per SHP-MEE and recorded within the Incident Log and Situation Reports to the SMPC/MEECC.

For Level 2/3 MOP incidents only, the incident level declaration completed by the IC will be confirmed by the SMPC as part of the Incident Level Declaration (EM Form 23) process once the form has been submitted to the SMPC/MEECC by the IC. For all MOP incidents, the SMPC can reject the incident level assessment and declaration made by the IC and request a review of the incident level assessment in collaboration with the IC before the incident level declaration is confirmed.

A template of the Incident Level Declaration (EM Form 23) is available on the DoT Maritime Website.

The declared incident level at any given time, and any changes to the declared incident level throughout an incident must be recorded in the Incident Log, Situation Reports and INBs.

Note: See Table 4 for Incident Level Criteria as per SHP-MEE

4.2.3. Strategic Control Priorities

As per requirements outlined in State EM Framework arrangements, the management of a response to any emergency, including a MOP Incident, must align to the State Strategic Control Priorities as outlined by the SEMC. For a MOP Incident, the strategic control priorities are:

- **PROTECTION AND PRESERVATION OF LIFE:** This is the fundamental overarching priority for the State and includes safety of response personnel and safety of community members (including vulnerable community members and visitors/tourists) located within the incident area.
- Community warnings and information
- Protection of critical infrastructure and community assets
- Protection of residential property
- Protection of assets supporting individual livelihood and community financial sustainability
- Protection of environmental and heritage values.

In the context of a MOP Incident, the priority of 'Control the Source' should also be considered when relevant to the incident.

Note: The above priorities are not hierarchical; however, protection and preservation of life must be paramount when considering the Strategic Control Priorities that identify the priority roles and actions for the emergency management response, where there are concurrent risks or competing priorities.

4.2.4. Response Objectives

A key principle of incident management is "management by objectives". As part of this, to ensure all incident personnel are working towards one set of objectives, the IC, in consultation with the SMPC and the IMT (where relevant), determines the desired outcomes of the incident. These are communicated to all involved. At any point in time, an incident can have only one set of objectives.

The IC is to determine the appropriate incident objectives as soon as practicable upon assuming responsibility for the incident. For DoT as a CA, the standard list of "simple/initial" objectives to assist an IC in determining the desired outcomes of the incident are as follows:

- Ensure the safety of response personnel.
- Ensure the safety of the community.
- Manage a coordinated response effort.
- Control the source.
- Contain and recover the spilled oil.
- Recover and manage oiled wildlife.
- Minimise harm to the environment.
- Minimise harm to the community and economy.
- Keep the community informed of response operations.

4.2.5. OPEP/OSCP Implementation

During a MOP incident the CA should ensure any relevant OSCP/OPEP is applied and implemented as the start point for response and for ongoing incident management and planning as relevant. Existing OSCP/OPEPs are varied but include:

- Port OSCP (Port Authority and Port Operator)
- Offshore Petroleum Activity OPEP/OSCPs (Petroleum Titleholder)
- Maritime Facility OSCP (Port Facility or Boat Harbour/Marina)
- Vessel SOPEPs
- First Strike Plans and TRPs

4.2.6. Incident Control Centre

During a Level 2/3 MOP incident the CA is responsible for the establishment of an Incident Control Centre (ICC) able to suitably support the control requirements of the incident. An ICC may also be established during a Level 1 MOP incident when deemed necessary.

The exact composition and location of an ICC will be determined by the CA consummate to the particulars of a given incident, however an ICC should be suitable to facilitate the activities of the IMT and is an office space that has suitable displays and AV/IT provisions for the management of and incident.

Specifically, for DoT as a Controlling Agency, the default location for the ICC is the DoT Maritime Office in Fremantle, WA. Depending on the nature of the incident, this ICC may also be supplemented by the establishment of a Forward Operating Base (FOB) and Staging Areas, which are facilities closer to the actual incident site and able to facilitate the activities of the On-Scene Coordinator, along with the management of both response personnel and equipment requirements such as briefing areas, rest/amenity areas and laydown areas.

Activation of an ICC is at the discretion of the IC on behalf of the CA.

Specifically, for DoT as a CA, activation of the ICC is achieved via email from the IC (or a delegated person within the IMT) to required members of the IMT and users of the DoT Maritime Office that may be disrupted by the activation ahead of or because of any required establishment.

4.2.7. Incident Management Team

During a MOP Incident, the appointed IC is responsible for the establishment of an IMT to assist in the management of the incident. The IMT is a group of incident management personnel comprising the IC and personnel appointed by the IC to be responsible for functions including operations, planning intelligence and logistics. The IMT is led by the IC and the exact composition of the IMT will be determined by the IC consummate to the particulars of a given incident, however an IMT should be suitable to facilitate the conduct of a safe and effective response.

During a Level 2/3 MOP incidents, the appointment of key functional officers and their relevant delegations should be recorded in writing by the IC either in the Incident Log or through formal delegation forms/documents.

DoT as a CA utilises the *AMSA Aide Memoir for Marine Pollution Response* as a reference document for specific information relating to roles and responsibilities in an IMT for a MOP incident. It is recommended other CAs do so also. The *AMSA Aide Memoir for Marine Pollution Response* is available on the AMSA Website.

Activation of an IMT is at the discretion of the IC.

Specifically, for DoT as a CA, activation of the IMT is achieved via personnel mobilisation arrangements either actioned directly by the IC or facilitated by relevant Functional Leads or the Logistics Function for an incident.

4.2.8. Controlling Agency Transfer

In the event of a transfer of CA during an MOP Incident, the incoming IC from the receiving CA is required to work through a CA transfer checklist as per protocols for the transfer stipulated by the SMPC and MEECC. Specific CA transfer checklists are outlined in the relevant IGN and PGN, and include requirements such as:

- Confirm date and time of formal transfer of Incident Control.
- Confirm ongoing cross agency lines of communication arrangements, including GIS where relevant.
- Confirm existence and adherence to an OPEP/OSCP and receive a copy (as relevant).
- Confirm the details and nature of the incident and receive a copy of any recent SITREP or modelling.
- Confirm the potential impact on the community and environment and actions underway or required to minimise exposure.
- Confirm current and planned response operations and secure a copy of any current IAP.
- Confirm measures to ensure the safety of responders and any significant safety risks and receive a copy of any SDS.
- Confirm response resources, which have been mobilised to or are in transit to the incident.
- Confirm notifications that have been completed.
- Confirm current and predicted level of the incident and receive a copy of any recent level declaration.
- Confirm details of other agency personnel identified to support the DoT IMT.
- Confirm the location any FOB or Staging Areas.
- Confirm public information arrangements and receive copies of any recent media statements.
- Receive a summary of all community / stakeholder engagement undertaken to date.

Note: When any Controlling Agency Transfer occurs, the relevant IGN or PGN include the requirements for personnel to support a receiving IMT, provided from the CA that is relinquishing control. The IGN also contains specific information relating to “Lead IMT” designations for an MOP incident originating from an Offshore Petroleum Activity that originates in Commonwealth Waters and impacts State Waters (inclusive of Port Waters) and thus more than one IMT established by multiple CAs exist.

4.3. Key Functional Responsibilities

The WA State Emergency Management Plan outlines the responsibilities of agencies and organisations in relation to specific functions and activities for incident management. For MOP incidents, relevant functional responsibilities are further laid out in the SHP-MEE for incident type or source and initial incident location. These responsibilities stem not only from arrangements outlined in the SHP-MEE, but also obligations outlined in the *Pollution of Waters by Oil and Noxious Substances Act 1987* (POWBONS). The functional responsibilities per organisation or agency for an MOP incident are:

- Department of Transport:
 - Control of the response activities to an MOP emergency in State Waters.
 - Control of the response activities to an MOP emergency in Shipping and Pilotage Act Port Waters.
 - Control of a Level 2/3 MOP emergency in Port Authority Act Port Waters, where it is deemed by the SMPC that it is more suitable the DoT be the Controlling Agency.
 - Preparation for or response to an MOP emergency across WA.
 - Provision and management of Public Information as the HMA, in conjunction with the Controlling Agency.

- Port Authority:
 - Control of the response activities to an MOP emergency in their Port Waters.
 - Preparation for or response to an MOP emergency in their Port Waters.
- Facility Operator:
 - Preparation for or response to an MOP emergency resulting from their Maritime Facility (including conduct of First Strike Actions).
- Petroleum Titleholder:
 - Preparation for or response to an MOP emergency resulting from their Offshore Activities (including conduct of First Strike Actions).
- Department of Biodiversity, Conservation and Attractions:
 - Provision of specialist advice to a controlling agency in the form of:
 - emergency response support for the management of oiled wildlife response activities.
 - advice on the environmental impacts of hazardous materials.
- Department of Water and Environmental Regulation:
 - Provision of specialist advice to a controlling agency in the form of:
 - emergency response support for detecting and monitoring discharges of hazardous materials into air, water, and soil.
 - waste management advice.
 - advice on the environmental impacts of hazardous materials.
 - contamination of the environment.
- Department of Fire and Emergency Services:
 - Provision of specialist advice to a controlling agency in the form of emergency response support for detecting and monitoring discharges of hazardous materials into air, water, and soil.
 - Support Public Information activities conducted by the HMA, through the facilitation of community and emergency alerts (on behalf of the state).
- Department of Mines, Industry Regulation and Safety:
 - Provision of specialist advice to a controlling agency in the form of advice on the public safety aspects resulting from an emergency involving hazardous materials.
- Department of Health:
 - Provision of specialist advice to a controlling agency in the form of advice on the public safety aspects resulting from an emergency involving hazardous materials.
- ChemCentre WA:
 - Provision of specialist advice to a controlling agency in the form of chemical support for the detection and identification of hazardous materials and chemical agents.
- Bureau of Meteorology:
 - Provision of specialist advice to a controlling agency in the form of weather observations, forecasts, notifications, and warning.
- Local Governments:
 - Provision of specialist advice to a controlling agency in the form of local area advice.

5. Mobilisation

This section outlines the mobilisation arrangements to allow for the deployment and application of specific resources for the management of a MOP incident in WA.

5.1. Stockpiles

Stockpiles of response equipment for MOP incidents are held at both activity/site and state/national level. This IMP only addresses the specifics for stockpiles at the state/national level, available to supplement activity/site specific equipment deployed as part of first strike or initial response.

5.1.1. State Response Equipment Stockpiles

DoT maintains stockpiles of specialist Oil Spill Response Equipment throughout WA, which are positioned and designed to respond to an actual or impending Level 2/3 MOP incident across WA and at short notice. The equipment held within these stockpiles is referred to as State Response Equipment (SRE), thus the stockpiles are referred to as SRE Stockpiles.

SRE comprises of Oil Spill Response Equipment, in the form of “Response Kits,” “General Equipment” and “Response Supplies.” Response Kits will always be mobilised as a complete entity and not broken down into the individual pieces of equipment that comprise the kit. SRE and the SRE Stockpiles are exclusively managed by the DoT’s MEER Team and differ from other equipment held by DoT to meet response preparedness requirements for specific maritime facilities or activities.

There are four types of SRE Stockpiles that are located throughout WA, with the majority of SRE held in Fremantle and Karratha. The types and locations of the SRE stockpiles are:

- **Incident Management Stockpile:** This stockpile covers the entirety of WA and includes all the equipment required to establish an ICC, FOB, Staging Areas and Resupply, Control Zones, and Communications for the response to an MOP incident.
 - Location: **Fremantle, WA** (Split Between D-Shed at Fremantle Port and the DoT Maritime Office)
- **Field Response Stockpiles:** These stockpiles primarily cover specific parts of the state (NW or Metro/SW) however can be mobilised throughout the entirety of WA as required. They include all the equipment required to facilitate inshore and shoreline response activities including shoreline clean-up, skimming, booming, flushing, and small-scale waste management for the field response to an MOP incident.
 - Locations:
 - **Karratha, WA** (Light Industrial Area)
 - **Fremantle, WA** (D-Shed at Fremantle Port)
- **Assessment and Liaison Stockpiles:** These stockpiles cover their immediate area and include all the equipment required to facilitate immediate appraisal and coordination of an MOP incident in support of a CA and DoT as the HMA / JA.
 - Locations:
 - **Broome, WA** (DoT Regional Office)
 - **Karratha, WA** (DoT Regional Office)
 - **Carnarvon, WA** (DoT Regional Office)
 - **Geraldton, WA** (DoT Regional Office)

- **Fremantle, WA** (DoT Maritime Office)
- **Albany, WA** (DoT Regional Office)
- **Esperance, WA** (DoT Regional Office)
- **Wildlife Response Stockpile:** This stockpile covers the entirety of WA and includes all the equipment required to establish initial oiled wildlife field processing and washing as part of an MOP incident.
 - Location: **Fremantle, WA** (D-Shed at Fremantle Port)

Note: Specific information relating to the composition of SRE and SRE Stockpiles is outlined in the State Capability Map, available on the DoT Maritime Website.

Mobilisation of SRE from a SRE Stockpile is via coordination by DoT. Specifically, for DoT as a CA, mobilisation of SRE is under the coordination of the IMT. Other CAs can request mobilisation of SRE from a SRE Stockpile via the SMPC for any actual or impending Level 2/3 MOP incident where support is deemed necessary.

5.1.2. National Plan Stockpiles

As per National Plan Arrangements, the Australian Maritime Safety Authority (AMSA) maintains strategic equipment stockpiles of marine pollution response equipment around the Australian coastline. Stocks of dispersant are stored at these stockpiles as well as other key locations. These stockpiles are positioned and designed to supplement the local and regional resources of the jurisdictions and industry and AMSA maintains an accessible database of its national equipment holdings that records current location and serviceability information. The National Plan Stockpiles located in WA both include equipment and dispersant holdings and are located as follows:

- **Karratha, WA** (Light Industrial Area)
- **Fremantle, WA** (D-Shed at Fremantle Port)

Note: The National and State stockpiles in Karratha and Fremantle are collocated.

Mobilisation of National Plan Equipment is via coordination by either DoT or ASMA. CAs can request mobilisation of National Plan Equipment via the SMPC for any actual or impending Level 2/3 MOP incident where support is deemed necessary.

5.1.3. Industry Stockpiles

As per National Plan Arrangements and the AMOSPlan, in addition to National Plan Equipment, the petroleum industry, through the Australian Marine Oil Spill Centre (AMOSOC), maintains stockpiles around Australia. The three Industry Stockpiles in WA are located as follows:

- **Broome, WA**
- **Exmouth, WA**
- **Fremantle, WA**

Mobilisation of Industry Equipment is via coordination by AMOSC under the AMOSPlan. CAs can request mobilisation of Industry Equipment via the SMPC and National Plan arrangements for any actual or impending Level 2/3 MOP incident where support is deemed necessary.

5.2. Resource Mobilisation

For any MOP incident, resources will need to be deployed and mobilised as part of the response. The extent of resources required to be deployed will be related to the particulars of the incident. Under both SHP-MEE and National Plan arrangements, a cascade approach to the supply of response resources is applied which includes the use of resources by escalating through the mobilisation of local, state then national resources. Figures 10 and 11 below outline the general process for the mobilisation of response resources and the methods for mobilisation of resources (vessel, drive/tow, fly or freight) across WA. These processes outline how resources are mobilised depending on the resource level (local, state, or national), resource type (personnel/equipment) and the incident/stockpile location or mobilisation distance.

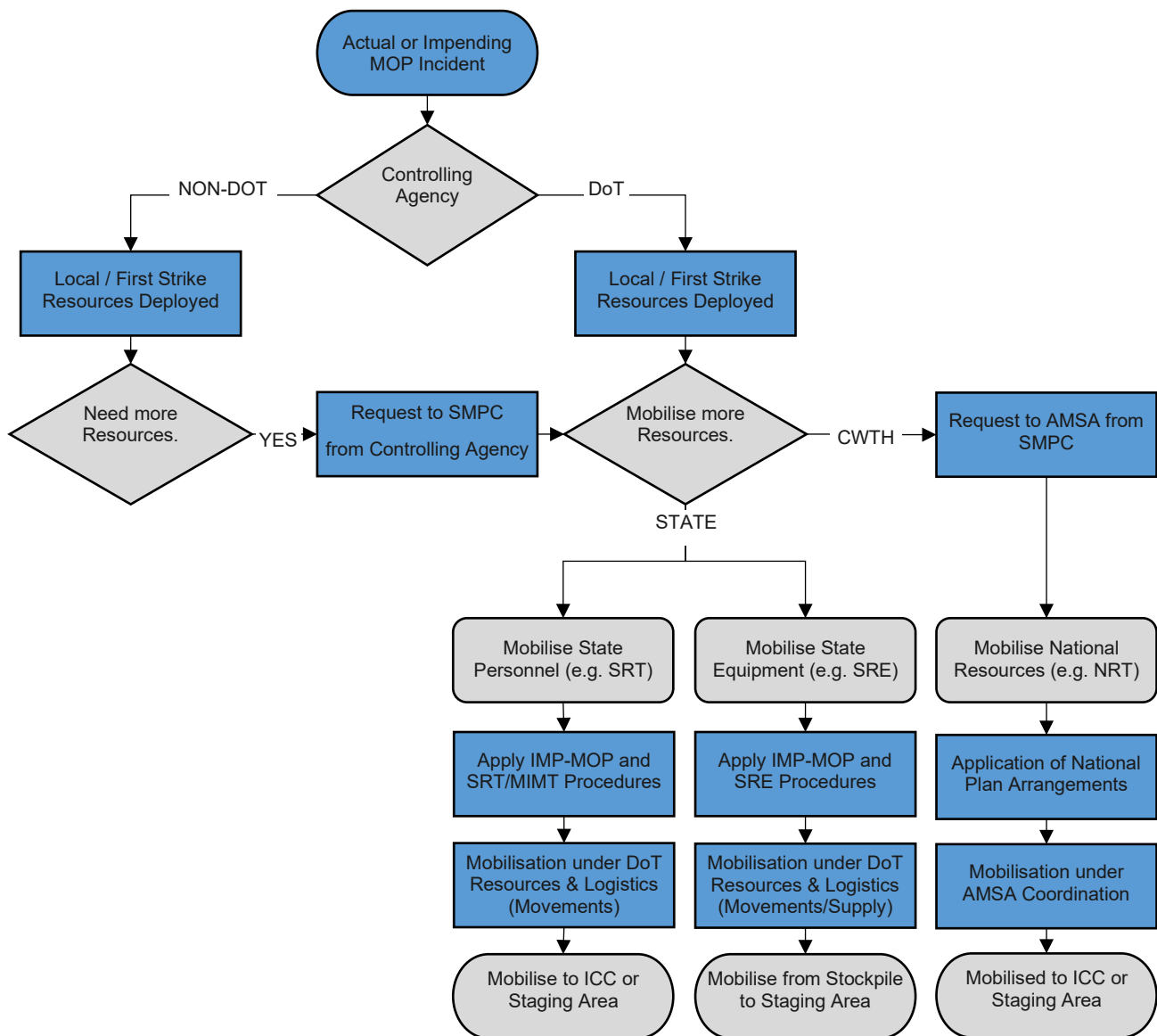


Figure 10: Mobilisation Flowchart



Figure 11: Mobilisation Map (DoT, 2023)

5.2.1. Personnel Mobilisation

The mobilisation of personnel linked to State and National Capability will be coordinated by DoT as the JA. This will be achieved either under the coordination of the SMPC (supported by the MEECC) when DoT is not the CA, or under the control of the IC (supported by the IMT) when DoT is the CA. In either case, the following procedures for mobilisation will be applied:

- Personnel mobilisation will only occur due to a Resource Request processed through both the Resources Unit and Logistics Function in the MEECC/IMT.
- The Logistics Function will facilitate arrangements relating to the following associated with Personnel Mobilisation:
 - Rostering
 - Movements
 - Sustainment (including Accommodation, Catering, Amenities, Communications and Medical)
- The Resources Unit will manage all resource tracking associated with Personnel mobilisation and use.
- As part of mobilisation, personnel will be mobilised to either a Staging Area or an ICC from where the Staging Area Coordinator (Operations Function) or ICC Facilities Unit (Planning Function) will manage inductions and integration into the incident.
- Personnel will either be mobilised by vehicle, vessel, or air travel as per parameters outlined in the mobilisation map.
- National plan personnel will be mobilised under stipulated national plan arrangements under coordination of AMSA in support of DoT as the JA.

5.2.2. Equipment Mobilisation

The mobilisation of equipment linked to State and National Capability will be coordinated by DoT as the JA. This will be achieved either under the coordination of the SMPC (supported by the MEECC) when DoT is not the CA, or under the control of the Incident Controller (supported by the IMT) when DoT is the CA. In either case, the following procedures for mobilisation will be applied:

- Equipment mobilisation will only occur due to a Resource Request processed through both the Resources Unit and Logistics Function in the MEECC/IMT.
- The Logistics Function will facilitate arrangements relating to the following associated with Equipment Mobilisation:
 - Stockpile Coordinator
 - Movements/Freight
 - Sustainment (including Maintenance, Supply, Ground Support and Communications)
- The Resources Unit will manage all resource tracking associated with Equipment mobilisation and use.
- As part of mobilisation, equipment will be mobilised to either a Specific Deployment Site, Staging Area, or an ICC from where the Staging Area Coordinator (Operations Function) or ICC Facilities Unit (Planning Function) will manage receipt and integration into the incident.
- Equipment will either be mobilised by vehicle/tow, vessel or, freight (truck/air) as per parameters outlined in the mobilisation map.
- National plan equipment will be mobilised under stipulated national plan arrangements under coordination of AMSA in support of DoT as the JA.

5.3. Registrations and Inductions

All personnel supporting an level 2/3 MOP incident must be registered and inducted into the incident under the coordination of the Controlling Agency. Registrations and inductions should also be conducted for level 1 MOP incidents where feasible. This is a key safety, coordination and record keeping requirement of safe and effective incident management. Inductions are also commonly a standard requirement for various facilities where MOP incidents may occur.

Inductions should be completed as soon as practicable post first strike activities and upon arrival of any personnel mobilised support an MOP incident. They should be relevant to the activities and functions the personnel will perform, and the site or location activities will occur. Inductions may include:

- Incident Briefing
- Safety Briefing
- Site Security Requirements
- Cultural/Heritage Requirements
- Administrative Requirements
- Vessel, Aircraft or Vehicle Requirements

Note: Registrations and Induction completions should be recorded. For all MOP incidents, any relevant site induction/security requirements must also be met.

For DoT as a CA, all personnel responding to a level 1 MOP are required to be registered and all personnel responding to a level 2/3 MOP are required to undergo a formal incident induction.

5.4. Establishing Operations

To ensure the safe and efficient conduct of operational activities as part of the response to a MOP incident, specific actions need to be taken to establish operations. These include mechanisms for on-scene or forward control, operational activity coordination and response site management.

5.4.1. Forward Operating Base

There will be only one ICC for any MOP incident, however when DoT is the CA, given the default DoT ICC is in the DoT Maritime Office in Fremantle, WA, there will often be an operational or logistical requirement to have a supplementary control facility called a Forward Operating Base (FOB) to assist in the control of response operations.

The FOB is a forward control point that is closer to the actual incident site and able to facilitate the activities of the On-Scene Coordinator (or Division Commander), along with the management of response requirements such as briefing areas and office areas. The size and function of a FOB will be dependent on the MOP incident and the available resources however by default, for any Level 2/3 MOP incident where DoT is the CA a FOB will be established and will be coordinated by an appointed Division Commander.

Activation and establishment of a FOB is at the discretion of the IC.

Specifically, for DoT as a CA, activation of the FOB is achieved via personnel and equipment mobilisation arrangements either actioned directly by the IC or facilitated by relevant Functional Leads or the Logistics Function for an incident. The appointed Division Commander is responsible for the establishment and activities of a FOB post mobilisation.

5.4.2. Staging Areas

During and MOP incident, if State or National resources are mobilised, there will often be an operational or logistical requirement to establish staging areas to assist in the mobilisation and management of response resources.

A staging area is a forward control point that is closer to the actual incident site and able to facilitate the management of both response personnel and equipment requirements such as inductions, briefing areas, rest/amenity areas, first aid support, maintenance and resupply facilities and laydown areas. The quantity, size and functions of a staging area(s) will be dependent on the MOP incident and the available resources however by default, for any Level 2/3 MOP incident where DoT is the CA a minimum of one staging area will be established and will be coordinated by an appointed Staging Area Coordinator.

Activation and establishment of a Staging Area is at the discretion of the IC.

Specifically, for DoT as a CA, activation of a Staging Area is achieved via personnel and equipment mobilisation arrangements either actioned directly by the IC or facilitated by relevant Functional Leads or the Logistics Function for an incident. The appointed Staging Area Coordinator is responsible for the establishment and activities of a Staging Area post mobilisation.

5.4.3. Coordination Areas (Divisions, Sectors and Segments)

For a MOP Incident, to facilitate the coordination of response operations, the incident area will be divided into a series of defined coordination areas to aid in managing span of control and specific response activities. The exact application of these areas will be dependent on the incident requirements however will be determined by the IMT or may be outlined in pre-established plans (OSCP/OPEP). The coordination areas are as follows:

- **Division:** Under the coordination of a Division Commander and a FOB (where necessary) a division is an area within the incident area that is defined by the IMT (Control, Planning and Logistics) and can either encompass the whole incident area or part of the incident area depending on the size and complexity of the response.
- **Sector:** Under the coordination of a Sector Commander and a Sector Control Point (where multiple teams are assigned), a Sector is an area within a division that is defined by the IMT (Operations, Planning, and Intelligence) and defined around geographical barriers or accessibility.
- **Segment:** An area within a sector that is defined by an Assessment Team of the IMT Intelligence Function. Segments are defined around the specific characteristics of the area that allow for ease of response option analysis, specific team allocation and operational activity coordination. The types of characteristics segments can be defined around include:
 - Shoreline/substrate type
 - Presence of specific flora/fauna
 - Access points or prominent features
 - Jurisdictional boundaries

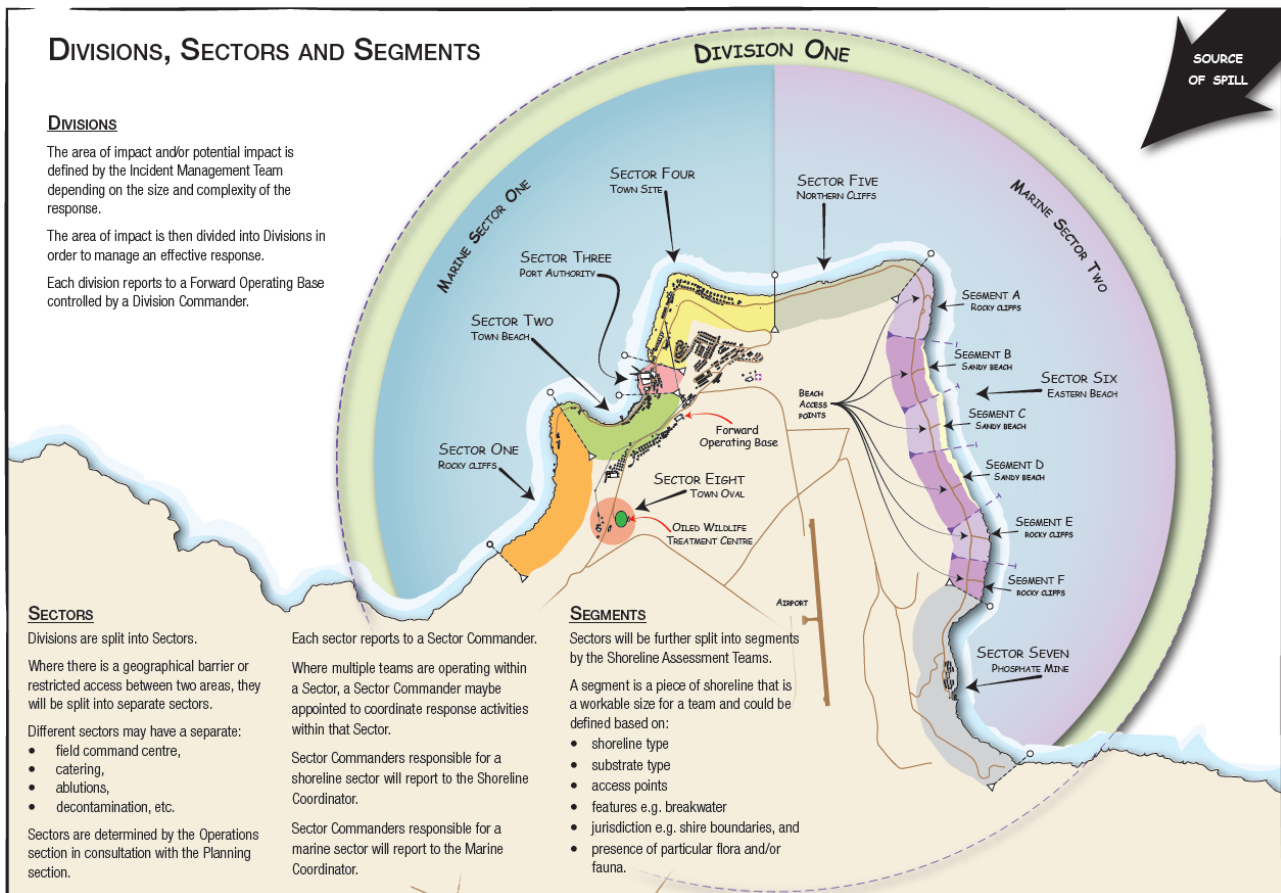


Figure 12: Coordination areas diagram (DoT, 2023)

5.4.4. Site Management (Hot, Warm and Cold)

For a MOP Incident, to facilitate the safety of response personnel and the efficient handling of contaminated material and equipment, a three-zone area control system to manage response activities is used. For each impacted or contaminated site, this system must be applied, inclusive of the requisite provision of decontamination and personnel protective equipment.

- **Hot Zone (Red):** The Hot Zone is the area of active clean-up operations and/or where there is a hazardous/contaminated environment. Hot Zones require signage, access restrictions/controls and the wearing of chemical resistant protective equipment. Hot Zones include the following areas:
 - Response vessel operations and exclusion zones
 - Dispersant spraying areas
 - Contaminated shorelines and shoreline clean up areas.
- **Warm Zone (Orange/Yellow):** The Warm Zone is adjacent to the Hot Zone and is the area of supporting operations and a buffer to entry and exit from a hazardous/contaminated environment. Warm Zones require signage, access restrictions/controls and the wearing of chemical resistant protective equipment. Warm Zones include the following areas:
 - Waste storage and disposal sites.
 - Decontamination Areas
 - Restricted zones buffering Hot Zone locations.

- **Cold Zone (Green):** The Cold Zone is all areas external to the Warm and Hot Zones. Cold Zones should still have basic response safety and personal protective equipment requirements and may include some restricted access areas and associated signage to assist in operations such as traffic management, equipment security or staging areas and control points. Cold Zones include the following areas:
 - Staging Areas
 - Administration Areas
 - Amenity and Rest Areas
 - Medical support
 - Briefing Areas
 - Coordination and Control Points

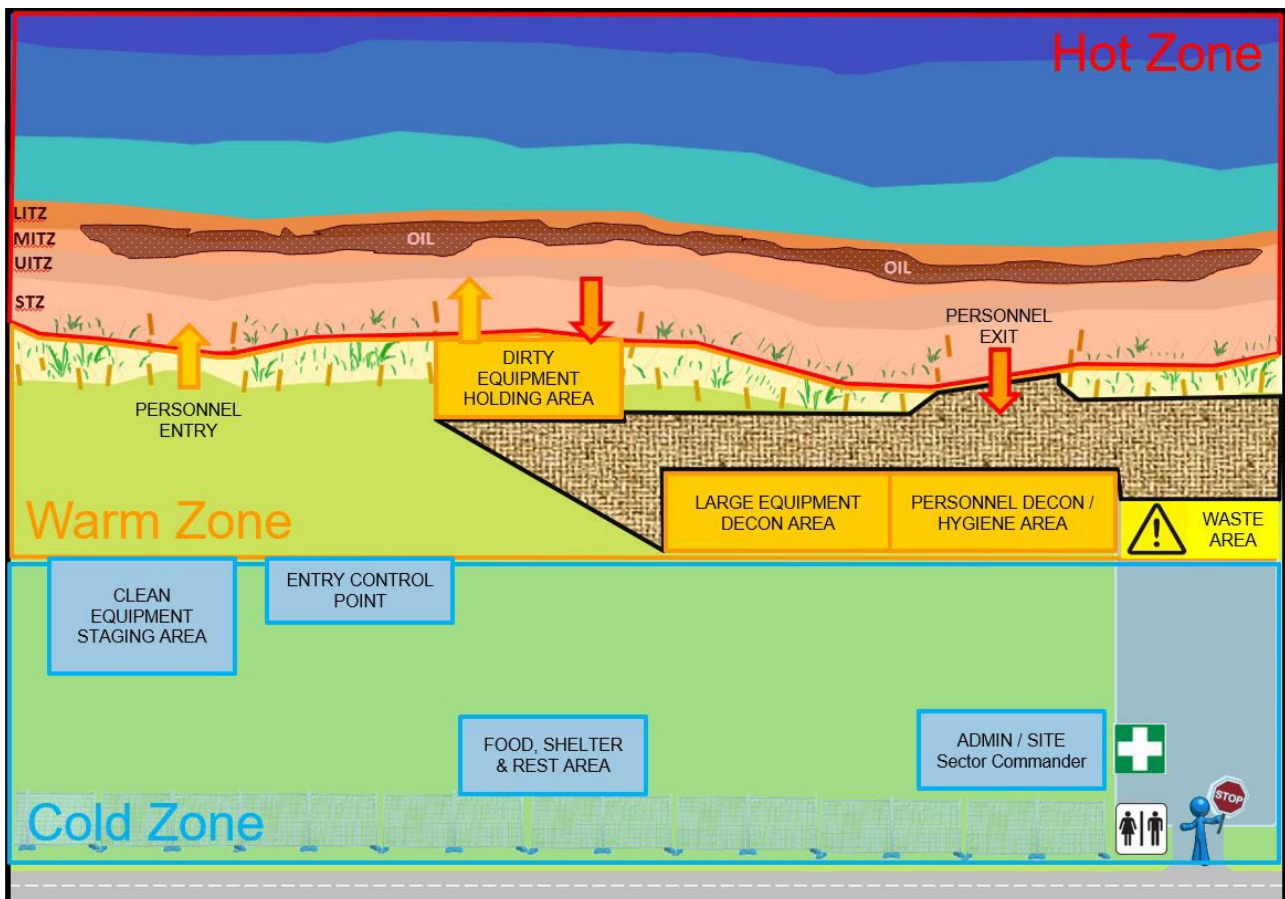


Figure 13: Site management diagram (DoT, 2023)

5.4.5. Site Security Arrangements

During a MOP Incident, to ensure the safety of response personnel and the efficient handling potential protestors, theft and vandalism site security arrangements will be required. Site security will need to ensure that all sites where responders are working have suitable security arrangements, including security fences, security guards and regular daytime and night time patrols.

Sites requiring security during an incident would include, but not limited to are:

- Incident Control Centres
- Forward Operating Bases
- Staging Areas
- Equipment Laydown Areas
- Shoreline Cleanup areas
- Waste Storage and Removal locations
- Medical Support locations
- Responder Accommodation

6. Operational Considerations

This section outlines key operational parameters that need to be considered and will define viable response options that can be applied for the management of a MOP incident in WA.

6.1. Met-Ocean Conditions

The characteristics of the weather and oceanographic conditions are influenced by many variables. It is therefore important that these characteristics and the impacts they will have on response options are understood this is achieved through the following key processes:

- Determining tidal times, heights, and zones (including intertidal and supratidal zones)
- Monitoring weather conditions (including weather, wind, waves, atmospheric temperature, humidity, and UV index)
- Monitoring oceanographic conditions (including sea temperature and currents)

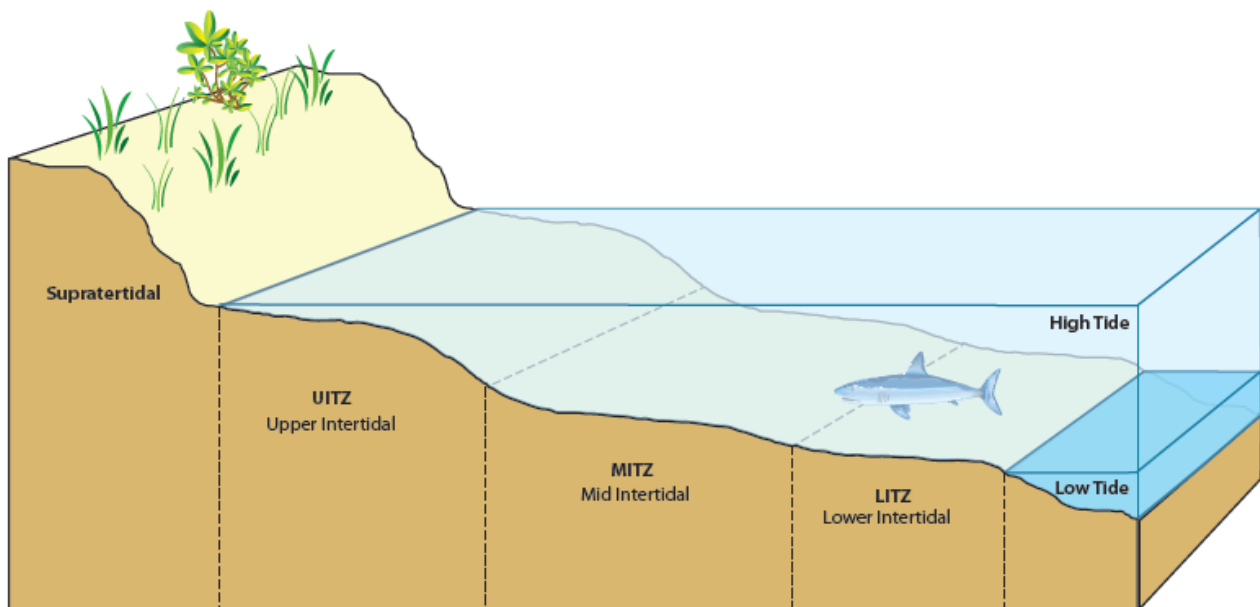


Figure 14: Tidal Zones (DoT, 2023)

Table 7: Beaufort Wind Scale (BoM, 2023)

Beaufort Scale	Description term	Units in knots	Description at Sea
0	Calm	0	Sea like a mirror.
1-3	Light winds	10 knots or less	Small wavelets, ripples formed but do not break: A glassy appearance maintained.
4	Moderate winds	11-16 knots	Small waves - becoming longer; fairly frequent white horses.
5	Fresh winds	17-21 knots	Moderate waves, taking a more pronounced long form; many white horses are formed - a chance of some spray
6	Strong winds	22-27 knots	Large waves begin to form; the white foam crests are more extensive with some spray
7	Near gale	28-33 knots	Sea heaps up and white foam from breaking waves begins to be blown in streaks along direction of wind.
8	Gale	34-40 knots	Moderately high waves of greater length; edges of crests begin to break into spindrift; foam is blown in well-marked streaks along the direction of the wind.
9	Strong gale	41-47 knots	High waves; dense streaks of foam; crests of waves begin to topple, tumble, and roll over; spray may affect visibility.
10	Storm	48-55 knots	Very high waves with long overhanging crests; the resulting foam in great patches is blown in dense white streaks; the surface of the sea takes on a white appearance; the tumbling of the sea becomes heavy with visibility affected.
11	Violent storm	56-63 knots	Exceptionally high waves: small and medium sized ships occasionally lost from view behind waves; the sea is completely covered with long white patches of foam; the edges of wave crests are blown into froth.
12+	Hurricane	64 knots or more	The air is filled with foam and spray. Sea completely white with driving spray; visibility very seriously affected

6.2. Oil Characteristics

The characteristics of oil and how it will behave during an MOP incident are influenced by many variables. It is therefore important that the characteristics of the product involved as part of the MOP incident are understood. This is achieved through the following key processes:

- Safety Data Sheet
- Assay and Sample Analysis Results
- In-Situ Observation and Testing

For the purposes of MOP incident management, oils are divided into four groups (I to IV) based on chemical properties such as:

- Specific Gravity
- Viscosity
- API Gravity
- Wax Content
- Asphaltenes
- Pour Point

Oil will also weather as per several differing processes which include:

- Spreading
- Evaporation
- Emulsification
- Entrainment
- Dissolution
- Oxidation
- Sedimentation

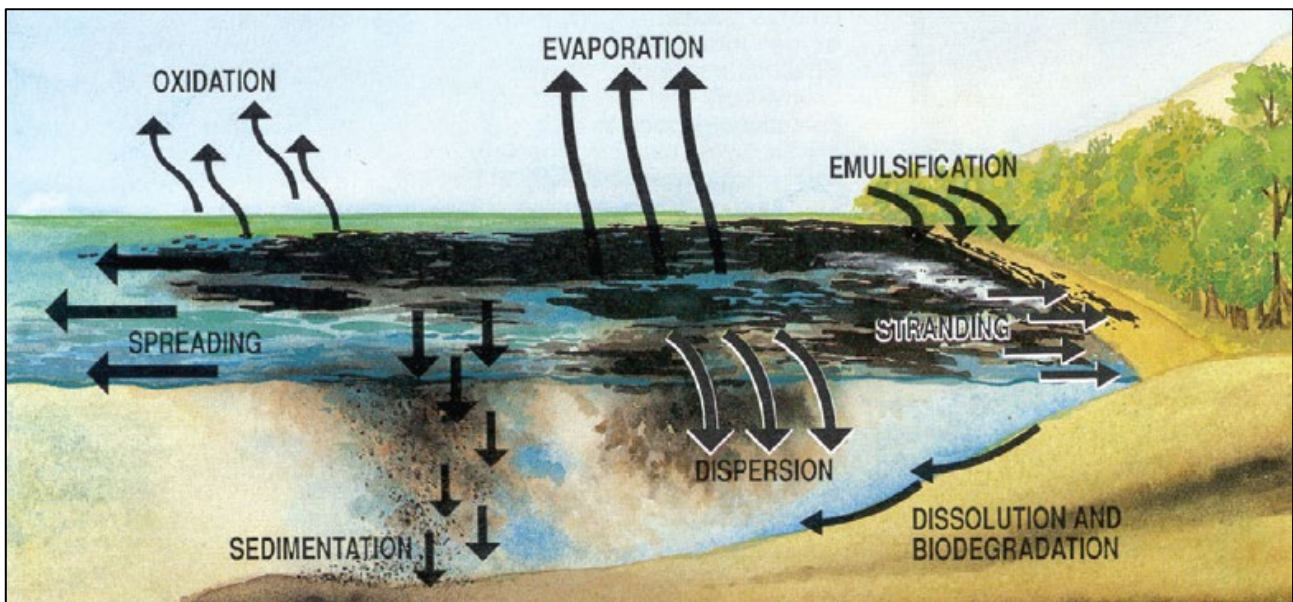


Figure 15: Weathering of Oil (DoT, 2023)

6.3. Location and Timeframe

The location and timeframe of an incident will influence what response options are viable in an MOP Incident. Table 8 below summarises indicative marine-based response options for marine areas over time and per location.

Table 8: Response Options by Time and Location (DoT, 2023)

OPTION	INSHORE				NEARSHORE				OPEN SEA			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
OIL GROUP (1)												
Within 24 hours												
Natural Recovery	R	R			R	R	F		R	R	F	
Mechanical Dispersion		R	F			R	F			R	F	
Containment & Recovery	C	R	R	R	F	R	R	R		C	C	C
(a) Weir Skimmers	F	R	R	R		R	R	R		C	C	C
(b) Oleophilic Skimmers		R	R	R		R	R	R		C	C	C
(c) Vacuum Skimmers		R	R	R		R	R	R				
(d) Sorbent Recovery	F	R	R	R		R	R	R				
Dispersant Application		C	C	C		C	C	C		C	C	C
Up to 48-72 hours												
Natural Recovery	R	R			R	R	F		R	R	F	
Mechanical Dispersion	R	F			R	F			F	F		
Containment & Recovery	C	R	R	R	F	R	R	R		C	C	C
(a) Weir Skimmers	F	R	R	R		R	R	R		C	C	C
(b) Oleophilic Skimmers		R	R	R		R	R	R		C	C	C
(c) Vacuum Skimmers	F	R	R	R		R	R	R				
(d) Sorbent Recovery	F	R	R	R		R	R	F				
Dispersant Application						C	C	C		C	C	
Beyond 72 hours												
Natural Recovery	R	R			R	R	F		R	R	F	
Mechanical Dispersion												
Containment & Recovery	C	R	R	R	F	R	R	R	F	C	C	C
(a) Weir Skimmers	F	R	R	R		R	R	R		C	C	C
(b) Oleophilic Skimmers		R	R	R		R	R	R		C	C	C
(c) Vacuum Skimmers	F	R	R	R		R	R	R				
(d) Sorbent Recovery	F	R	R	R		R	F	F				
Dispersant Application												
Key and footnote:												
R	Recommended - preferred option			C	Conditional. Useful but may have adverse effects or logistical problems							
F	Feasible, but not preferred option				Not recommended - either not feasible or has significant adverse effects							

7. Response Options

This section outlines response strategies able to be applied as part of an MOP incident in Western Australia. How to apply relevant response strategies is not covered in detail.

Some response strategies for MOP including In-situ Burning and Decanting (water content of liquid waste back into the marine environment) have not been included as they are not considered viable response options in the context of WA.

Additional response strategies not specific to MOP including Information and Warning management and Culture and Heritage Management have been included as they are considered ubiquitous requirements in the context of WA.

Note: The response strategy of chemical dispersants specifically requires approval of the SMPC. All other response strategies can be employed at the discretion of the Controlling Agency so long as they align to the State Strategic Control Priorities and are justifiable through sound analysis and decision making.

7.1. Source Control

Source control is the various methods of stopping or controlling the flow of pollution at the source to minimise the total release volume or any ongoing or subsequent release of pollution into the environment at the site of the release.

Note: In any MOP incident the CA should work with the relevant Operator of the source to oversee and facilitate the achievement of source control where possible. For vessel-based source control, this should be included as part of broader Maritime Casualty Management processes.

7.1.1. Vessel Based Source Control

Source control from a vessel-based spill is managed by the operators of the vessel in accordance with their SOPEP. Techniques that may be applied include:

- Internal Fuel Transfer (e.g. between tanks)
- Pollutant transfer from vessel into controlled tanks (e.g. decanting or pumping)
- De-ballasting and stability management
- Damage control and Repairs (e.g. plugging)
- Removal of vessel from waterway or away from sensitivities

7.1.2. Offshore Petroleum Activity Based Source Control

Source control from an offshore petroleum activity-based spill is managed by the operators of the associated offshore petroleum activity or facility. Techniques that may be applied include:

- Blow out preventer activation
- Relief well drilling
- Capping stack installation

7.2. Monitor and Evaluate

Monitor and evaluate is any action taken to obtain situational awareness, collect data and observe or analyse the movement or behaviour of spilled pollutants to inform:

- Current and forecasted situation and incident characteristics.
- Response strategies that can be applied.
- Effectiveness of response strategies being applied.
- Termination decision making.
- Impact assessments.

Support for the facilitation of monitor and evaluate activities can be sourced through State and National resources, inclusive of:

- Marine Safety Patrol Vessels from DoT where available through State arrangements
- DFES air operations capability where available through State arrangements
- AMSA aircraft where available through National arrangements
- DoT or DFES Trained Air Observers where available through State arrangements
- Satellite Imagery or Remote Sensing support through National arrangements
- DoT Satellite Tracking Buoys through State arrangements
- DoT Oil Sampling and Field-Testing Kits through State arrangements
- DoT Sample testing arrangements (laboratory) through State arrangements
- Environmental and Technical advice through State and National arrangements

Note: In any MOP incident the CA should firstly utilise their own resources, resources held by other agencies with relevant functional responsibilities, resources identified as part of any relevant OSCP/OPEP, or locally available resources to facilitate monitor and evaluate activities.

Activation State or National resources to support monitor and evaluate activities is achieved via request from the CA to the SMPC for any actual or impending MOP incident where support is deemed necessary. If DoT is the CA, activation of DoT resources is through the DoT IC.

7.2.1. Vessel Surveillance

Vessel surveillance is the monitoring of a marine area from a vessel to:

- Identify the presence, movement, and behavior of pollution
- Gather information of general marine conditions and characteristics to enable incident management and decision making

Vessel surveillance can be visual or aided by technology such as visual-light, thermal or infra-red cameras, or instruments such as sampling kits.

Vessel surveillance can be conducted from any vessel however care should be taken to avoid vessels unnecessarily interacting directly with spilled pollution and the safety of crews operating on vessels in proximity to spilled pollutants must be managed closely.

Ad-hoc vessel surveillance can be conducted by anyone on a vessel; however its accuracy and reliability are enhanced if observers familiar with the characteristics and behavior of MOP are utilized.

7.2.2. Aerial Surveillance

Aerial surveillance, or air observations, is the monitoring of a MOP incident from an aircraft to:

- Identify the presence, movement, and behavior of pollution
- Gather information of general area conditions and characteristics to enable incident management and decision making

Aerial surveillance can be visual or aided by technology such as stabilized or zoom cameras, visual-light, thermal, or infra-red cameras, or the use of Un-crewed Aerial Systems

Aerial surveillance can be conducted from any aircraft or system with suitable visibility, persistence, capacity to fly over water and able to support the work of an Aerial Observer (as a passenger or via suitable video link). Care should be taken to closely manage the safety of crews operating in or around aircraft in proximity to spilled pollutants or flying over water.

Ad-hoc aerial surveillance can be conducted by anyone on an aircraft; however its accuracy and reliability are enhanced if observers familiar with the characteristics and behavior of MOP and the application of the Bonn Agreement are utilized.

7.2.3. Shoreline Observations

Shoreline observations is the monitoring of a MOP incident from the shoreline to:

- Identify the presence, movement, and behavior of pollution
- Gather information of general shoreline conditions and characteristics to enable basic incident management and decision making

Shoreline observations can be visual or aided by technology such as visual-light, thermal, or infra-red cameras, or instruments such as sampling kits.

Shoreline observations can be conducted by foot or by vehicle however care should be taken to avoid personnel or vehicles unnecessarily interacting directly with spilled pollution and the safety of crews operating on shorelines in proximity to spilled pollutants must be managed closely.

Ad-hoc shoreline observations can be conducted by anyone on a shoreline; however its accuracy and reliability are enhanced if observers familiar with the characteristics and behavior of MOP are utilized.

Shoreline observations is different to shoreline assessments which required additionally trained personnel and is covered specifically in the description of the response strategy of shoreline response.

7.2.4. Tracking Buoys

Tracking buoys are systems that can be deployed to provide near real-time ocean surface current velocity and wind velocity affected indications of oil movement to monitor the expected or actual movement of pollution in marine areas.

Tracking buoys are designed to mimic the movement of oil in the marine environment and generally utilize a satellite link to enable near real-time information. They can be deployed by air (depending on type), vessel or from a facility by an individual and should be deployed within or on the leading edge of a pollution slick. Care should be taken to avoid personnel unnecessarily interacting directly with spilled pollution and the safety of crews operating in proximity to spilled pollutants must be managed closely.

Tracking buoys are not guaranteed to exactly mimic the movement of pollution in the marine environment. As such, confirmation of actual pollution movement should always occur.

7.2.5. Satellite Imagery or Remote Sensing

Satellite Imagery or Remote Sensing is the use of satellites for the monitoring of a MOP incident over a larger area that can be achieved with just aerial or vessel surveillance. Satellite Imagery or Remote Sensing is generally facilitated using Synthetic Aperture Radar as it has extensive coverage and because it can image through clouds, darkness, smoke, or other occlusions.

7.2.6. Initial Oil Characterisation

Initial Oil Characterisation is the use of sample kits and sample testing to determine or confirm the characteristics of a pollutant. When undertaking sampling, the safety of crews operating in proximity to spilled pollutants must be managed closely. Sampling kits can be used to gather samples of pollutants throughout an incident to determine:

- Initial pollutant characteristics
- Pollutant behavior and weathering over time
- Efficacy of dispersants
- Options for treatment/disposal of waste
- Pollution source

Testing of samples to determine pollution characteristics can include both field testing and laboratory testing. Laboratory testing can provide accurate, detailed, predictive, and extensive information however is not necessarily timely. Field testing can provide timely, general, and useable information that is not predictive however is not necessarily accurate or reliable. When undertaking testing, the safety of crews operating in proximity to spilled pollutants must be managed closely. Generally, field testing can only provide the following basic information:

- Current Specific Gravity (does it float in salt or fresh water)
- Current Viscosity (dip cup testing)
- Dispersant Effectiveness Test (shake test)
- Presence Hazardous Gasses (atmosphere testing)

7.2.7. Water Quality Monitoring

Water quality monitoring is the conduct of testing to determine pollutant levels at specific points of time and changes in water quality over time. Multiple techniques can be used to gather information pertaining to water quality and may include both field and laboratory-based testing and measurements. Water quality monitoring should be aimed generally at achieving things such as the following:

- Monitoring impacts of pollutants to sensitivities
- Monitoring effectiveness of response activities
- Supporting endpoint criteria determination and attainment
- Informing subsequent recovery management

Note: In any MOP incident the CA should implement any established or pre-planned monitoring arrangements that exist. In most cases, water quality monitoring will be facilitated through contracted services over a protracted timeframe. Where established or pre-planned arrangements do not exist, new or altered monitoring arrangements will need to be determined based on the specific requirements of the incident and in consultation with relevant technical and environmental experts.

7.3. Information and Warnings Management

Information and warnings management is the facilitation of community safety through ensuring adequate emergency warnings and incident information is provided for an impacted or potentially impacted community. The key purpose of information and warnings management is to minimise impacts to and community concerns from an incident where feasible. The effectiveness of information and warnings management can be severely limited by a lack of timeliness and accuracy in information and a lack of accessibility to information by the public.

Successful information and warnings management requires the community to be aware as needed of the following:

- That an incident is occurring
- Any community safety issues
- What is required of the community?
- What response activities are occurring?
- How the community can seek assistance

Support for the facilitation of information and warnings management can be sourced through DoT MEER and State arrangements and include:

- Provision of warnings via:
 - The Emergency WA website (<https://www.emergency.wa.gov.au/>)
 - Temporary Notice to Mariners (by a Port Authority/Operator in Port Waters, DoT in State Waters, and AMSA in Commonwealth Waters)
 - Establishment of exclusion zones and enforcement via on-water or shoreline patrols/signage
- Communication of incident details via:
 - Media statements
 - Media briefings
 - Activation of the DoT MEER Incident Website (<https://www.wa.gov.au/>)
 - Establishment of incident specific social media channels/groups
- Receipt of community enquiries via:
 - Activation of the DoT MEER Incident Hotline (1300 966 459)
 - Facilitation of community briefings/town-halls
 - Establishment of incident specific social media channels/groups

Note: Additional support for the facilitation of information and warnings management can be achieved through request for activation of the State Support Plan – Emergency Public Information.

Activation of State or National resources to support information and warnings management is achieved via request from the CA to the SMPC for any actual or impending MOP incident where support is deemed necessary. If DoT is the CA, activation of DoT resources is through the DoT IC.

7.4. Natural Recovery

Natural recovery acknowledges that in some circumstances and over time spilled oil and an impacted environment may naturally recover without the application of other response options. Natural recovery may be a holistic strategy, or a subsequent strategy post the end point of other strategies where response efficacy thresholds have been met. Where Natural Recovery is selected as a response strategy, ongoing monitoring through the application should be undertaken.

Times where natural recovery might be considered viable include:

- Impact to sensitivities is minimal.
- Application of other strategies may cause more harm.
- Other strategies are unlikely to be effective.
- High water energy environments that assist natural recovery.

Note: In any MOP incident, the CA must support decisions to implement natural recovery as a response strategy through the application of any relevant OSCP/OPEP and analysis and decision support tools such as the NEBA/SIMA.

Analysis and technical advisory support to enable decision making around the application of Natural Recovery can be sourced through State and National resources or arrangements.

Activation of State or National support is achieved via request from the CA to the SMPC for any actual Level 2/3 MOP incident where support is deemed necessary.

7.4.1. Agitation

Natural recovery can be assisted by the technique of agitation, designed to break up the slick of an oil spill to expedite the natural recovery process. Agitation is generally only suitable on less persistent pollutants and smaller volumes of pollution. When conducting agitation, the safety of crews operating in proximity to spilled pollutants must be managed closely. Agitation can be achieved by mechanical options like:

- Use of vessels and propeller wash
- Use of fire hoses and water jets

7.5. Chemical Dispersants

Chemical dispersant use is the application of chemicals to an oil spill to minimise surface oil reaching sensitive environments. These chemicals act by reducing surface tension at the oil/water interface, making it easier for wind, wave, and current motion allow oil to disperse into the water column as small oil droplets that are then naturally consumed by petroleum-degrading micro-organisms. In effect, chemical dispersants are seeking to accelerate the natural dispersal and degradation of oil spills however the effectiveness and benefits of the use of chemical dispersants is limited. Chemical dispersants can be applied by:

- Surface application
 - Aerial application
 - Vessel application
- Subsea injection

Chemical dispersants are selected according to their effectiveness with the oil type and are classified as Oil Spill Control Agents (OSCA) by AMSA. Only products listed on AMSA's OSCA Register, that have passed the necessary toxicity and efficacy testing are available for use during a response. When handling and applying chemical dispersants, the safety of crews operating in proximity to spilled pollutants and the chemical dispersants themselves must be managed closely. The application of dispersants also requires ongoing monitoring to ensure its effectiveness throughout, once ineffective this response strategy should be ceased.

The consideration of the application of chemical dispersants in WA State Waters is governed by the Dispersant Consent Framework and approval for the use of dispersants as a response option requires approval by the SMPC in consultation with the ESC via strict protocols.

7.5.1. Aerial Dispersant Application

Aerial application of chemical dispersants involves the use of aircraft spraying dispersants at low altitudes onto the surface of oil. Under National Plan arrangements, this is achieved through activation of the Fixed Wing Areal Dispersant Capability which is jointly administered by AMSA and AMOSC. As part of that arrangement, AMSA and AMOSC have the capacity to facilitate the following:

- Aircraft Activation
- Provision of Airbase Manager and Loading Crew
- Provision of Dispersants

In addition to the above, additional requirements that need to be identified and facilitated through the CA and/or JA are:

- Identification of a suitable Airbase
- Provision of Air Attack Supervisors

Activation of Fixed Wing Areal Dispersant Capability achieved via request from the CA to the SMPC for any actual Level 2/3 MOP incident where support is deemed necessary.

7.5.2. Vessel Dispersant Application

Vessel application of chemical dispersants involves the use of vessels spraying dispersants onto the surface of oil. Under National Plan arrangements, stockpiles of dispersants and vessel-based application systems are available from National Stockpiles however the CA will need to identify and facilitate suitable vessels for the implementation of this response option.

Activation of National Plan Dispersant Stockpiles achieved via request from the CA to the SMPC for any MOP incident where dispersant stocks are required.

7.5.3. Sub-sea Dispersant Injection

Subsea injection of chemical dispersants involves the use of a subsea injection system which applies the dispersant to the oil at the release point for an offshore petroleum incident. A stockpile of dispersants and specialised equipment is available as part of industry response preparedness arrangements as part of the Subsea First Response Toolkit managed by AMOSC. This capability will be activated by an Offshore Petroleum Titleholder (or AMOSC on behalf of them) under their functional responsibilities for an MOP incident resulting from Offshore Petroleum Activities.

7.6. Containment and Recovery

Containment and recovery is the application of techniques and equipment to limit the spread of oil and to remove it from the sea surface. Containment and Recovery is part of Marine Response operations and relies on the use of specialised equipment such as booms and skimmers or other systems. The key purpose of containment and recovery is to avoid impacts to sensitivities from spilled oil however its effectiveness can be severely limited by conditions such as oil type, weather and tides or currents. Table 9 below summarises indicative operational constraints for containment and recovery options:

Table 9: Operational Constraints for Containment and Recovery (DoT, 2023)

Response Option		Constraints			
		Sea State (Beaufort Scale)	Current (Knots)	Wind (Knots)	Oil Viscosity (Centistokes - cSt)
Boom	Containment	3-4	1.0	16-22	-
	Deflection	3-4	2.0	16-22	-
Skimmers	Weir	1	1.0	7	<1000
	Disc	2-3	1.0	11-16	<1000
	Mop/Belt	3-4	1.0	16-22	>1000
	Vacuum	1	1.0	7	-

The key considerations for the application of containment and recovery include:

- Suitable vessel availability.
- Trained operators.
- Availability of waste storage.
- Secondary contamination risks.
- Spill trajectory and movement.
- Oil type.

Support for the facilitation of containment and recovery activities can be sourced through State and National resources, inclusive of:

- DoT inshore booming, inshore skimming, and site control capability
- Various National Plan stockpile booms, skimmers, and temporary waste storage options

- Some specialised systems such as MARCO Skimmers and Current Busters from National Plan

Note: In any MOP incident the CA should firstly utilise their own resources, resources held by other agencies with relevant functional responsibilities, resources identified as part of any relevant OSCP/OPEP, or locally available resources to facilitate containment and recovery activities.

Activation of State or National resources to support containment and recovery activities is achieved via request from the CA to the SMPC for any actual or impending MOP incident where support is deemed necessary. If DoT is the CA, activation of DoT resources is through the DoT IC.

7.6.1. Containment Booming

Containment booms are temporary floating barriers that can be used to contain oil spills in either static or mobile applications. They can be used in conjunction with anchoring or securing systems (including magnets) or vessels (through use of tow bridles) to facilitate containment of oil on the sea surface and are most effective when used at or close to the spill source. Differing types of booms suit differing applications and conditions. Whenever boom is deployed it should be constantly monitored and manipulated or configured to ensure that it is effective, and any containment remains intact and is not failing.

Boom can fail in many ways, including:

- Entrainment
- Drainage
- Splash-over.
- Submergence
- Plaining
- Structural

There are many types of booms however the broad categories are:

- Solid Buoyancy
- Self-Inflatable
- Pressure-Inflated
- Land/Sea (Shoreline)

When using booms, the following are common auxiliary items for their use:

- Towing Bridles and Lines
- Anchors (marine anchor, holdfast, magnet)
- Deployment vessel
- Pumps/Blowers (inflated boom)

7.6.2. Mechanical Recovery

Mechanical Recovery is the use of skimmers which are mechanical systems designed to collect oil from the sea surface. They can be used in conjunction with containment booms to facilitate recovery of contained oil and can be utilised from shorelines, waterside infrastructure, or vessels. Differing types of skimmers suit differing applications and conditions. Whenever skimmers are deployed, they require constant operation and manipulation by trained personnel to ensure that they remain effective, and their use needs to be managed in synch with the waste management of recovered oil.

The selection of the right skimmer to use depends on multiple consideration, including:

- Oil viscosity and volume
- Operating environment
- Weather (sea state)
- Waste management capacity

There are many types of skimmers however the broad categories are:

- Oleophilic
 - Rope mop
 - Brush
 - Disc
 - Drum
- Weir
 - Active
 - Passive
- Vacuum/Suction

When utilising skimmers, the following are common auxiliary items for their use:

- Deployment and retrieval system (e.g. Vessel, Crane, or Hiab)
- Pumps and Hoses
- Temporary Storage Tanks
- Site Control Provisions (decontamination and secondary contamination management)

Note: Skimmers are also commonly categorized based on optimum recovery rate per hour (e.g. 25 Ton)

7.6.3. Sorbents

Sorbents is the use of oil sorbent material which is designed to collect oil from the sea surface. They can be used in conjunction with containment boom to facilitate recovery of contained oil and can be used from shorelines, waterside infrastructure, or vessels. Differing types of sorbents suit differing applications and conditions. Whenever sorbents are deployed, they require constant monitoring to ensure they remain effective and do not become too sodden.

There are many types of sorbents however the broad categories are:

- Sorbent boom
- Sorbent pads
- Sorbent matting/rolls
- Snares

Sorbents can be used to both recover oil off the sea surface (e.g. sorbent booms or snares) or also to manage secondary contamination (e.g. sorbent pads or matting/rolls). Sorbents should be used sparingly as they can amplify waste volumes and things such as sorbent booms should not be used as alternate containment options unless for small scale or short-term incidents.

7.6.4. Other Systems

In addition to skimmers and booms as separate pieces of equipment, there are additional systems available for the conduct of containment and recovery together. These systems are often specialised capabilities and include combined recovery systems such as:

- Oil recovery vessel (e.g. Marco Skimmer)
- High speed sweep systems (e.g. Current Buster)

These systems often provide both containment and recovery components along with temporary waste storage to provide a combined containment and recovery option in response. They can be used in conjunction with other forms of containment and recovery and differing types of systems suit differing applications and conditions. Whenever these systems are deployed, they require constant operation and manipulation by trained personnel to ensure that they remain effective, and their use needs to be managed coordinated with the waste management of recovered oil.

When using combined containment and recovery systems, the following are common auxiliary items for their use:

- Deployment and retrieval system (e.g. Vessel, Crane, or Hiab)
- Suitable deployment or retrieval site
- Pumps, Hoses and Temporary Storage Tanks (ongoing waste management)
- Secondary contamination management
- Suitable support or towage vessels

7.7. Protection and Deflection

Protection and deflection is the application of techniques and equipment to prevent spilled oil from impacting shorelines or deflect oil to less sensitive locations. Protection and deflection is part of Marine or Shoreline Response operations and relies on the use of specialised equipment such as booms or other physical barriers, or techniques such as weirs, sorbent filters and bubble curtains. The key purpose of protection and deflection is to avoid impacts to sensitivities from spilled oil however its effectiveness can be severely limited by conditions such as oil type, weather and tides or currents. Table 10 below summarises indicative operational constraints for booming in relation to currents as part of protection and deflection:

Table 10: Maximum boom deployment angles to flow direction for current strength to prevent escape of oil (ITOPF, 2023)

Current Strength		Maximum Angle (Degrees)
(knots)	(m/s)	
0.7	0.35	90
1.0	0.5	45
1.5	0.75	28
2.0	1.0	20
2.5	1.25	16
3.0	1.5	13

The key considerations for the application of protection and deflection include:

- Protection Priorities
- Currents and tidal conditions
- Location of sensitivities
- Suitable vessel availability
- Trained operators
- Availability of adequate anchors
- Spill trajectory and movement.
- Oil type.
- Maintenance of protection/deflection system

In considering the applicability of protection and deflection as a response option, the following general protection priorities and environmental considerations should be applied:

- Protection Priorities
 - Human health and safety
 - Habitat and cultural resources
 - Rare and / or endangered flora and fauna
 - Commercial resources
 - Recreational and amenity areas.
- Environmental Considerations
 - How important is the resource?
 - How well will it self-clean?
 - How well can it be cleaned?
 - What will be the impact of cleaning?
 - How long will it take to recover?

Support for the facilitation of protection and deflection activities can be sourced through State and National resources, inclusive of:

- DoT inshore booming capability
- Various National Plan stockpile booms and anchors

Note: In any MOP incident the CA should firstly utilise their own resources, resources held by other agencies with relevant functional responsibilities, resources identified as part of any relevant OSCP/OPEP, or locally available resources to facilitate protection and deflection activities.

Activation of State or National resources to support protection and deflection activities is achieved via request from the CA to the SMPC for any actual or impending MOP incident where support is deemed necessary. If DoT is the CA, activation of DoT resources is through the DoT IC.

7.7.1. Protection and Deflection Booming

Protection and deflection booms are temporary floating barriers that can be used to manage the movement of oil spills. They can be used in conjunction with anchoring or securing systems (including sea anchors, land anchors or land/sea-boom) to facilitate protection or deflection of oil on the sea surface in fixed arrays and are most effective when used in proximity to the relevant sensitivities they are seeking to protect.

Differing types of booms suit differing applications and conditions. Whenever boom is deployed it should be constantly monitored and manipulated or configured to ensure that it is effective, and any protection or deflection remains intact and is not failing.

The differing booming arrangements able to be employed as part of protection and deflection are:

- Containment Booming
 - Positioning boom to prevent oil from travelling from its present location and impacting other areas.
 - Primary and secondary containment arrays should be employed where possible.
- Exclusion Booming
 - Positioning boom to prevent oil from travelling into and impacting specific locations.
 - Multiple booms and effective shoreline sealing should be employed where possible.
- Deflection Booming
 - Positioning boom to redirect the flow of oil from or into a specific area.
 - The aim is to divert oil flow away from sensitivities or determined protection priorities, knowing the oil could have an impact elsewhere.

Boom can fail in many ways, including:

- Entrainment
- Drainage
- Splash-over.
- Submergence
- Plaining
- Structural

There are many types of booms however the broad categories are:

- Solid Buoyancy
- Self-Inflatable
- Pressure-Inflated
- Land/Sea (Shoreline)

When using booms, the following are common auxiliary items for their use:

- Towing Bridles and Lines
- Anchors (marine anchor, holdfast, magnet)
- Deployment vessel
- Pumps/Blowers (inflated boom)

7.7.2. Other Techniques

In addition to use of booms for protection and deflection, there are additional techniques available however they are often specialised or require specific equipment to implement. These other techniques include:

- Dams or Weirs
 - Dams or weirs can be created using fixed physical barriers or use of earthworks to stop the flow oil on the surface of the water. Depending on the technique applied, the dam or weir may also stop the flow of water entirely along with the oil or allow for the underflow of water while still managing the flow of oil on the surface.
- Sorbent filters
 - Sorbent filters can be created using fixed sorbent barriers that filter the flow of oil and thus stop the flow oil on the surface of the water by capturing it in the sorbent filter. Depending on the technique applied, the filter may be applied to all water flowing through a certain area or just the surface of the water to manage oil movement.

- Bubble curtains.
 - Bubble curtains can be created using submerged bubble tubing that emits a bubble barrier which is difficult to penetrate by floating elements such as oil molecules thus stopping the flow oil. Depending on the properties of the spilled oil and the weather conditions bubble curtains can have limited effects on concentrated oil on the sea surface.

7.8. Shoreline Response

Shoreline response is the application of techniques, personnel, and equipment to assess, recover or manage stranded oil or oil impacting shorelines. Shoreline response relies on the use of a wide array of options dependent on the specific shoreline characteristics where the impact has occurred. The key purpose of shoreline response is to minimise impacts to sensitivities from spilled oil however its effectiveness can be severely limited by conditions such as oil type, weather and tides, shoreline accessibility and resource availability.

The key considerations for the application of shoreline response are:

- Shoreline access
- Site control and secondary contamination risks
- Sectorisation and segmentation
- Arrangements of waste storage
- Spill trajectory and movement.
- Oil type.

Support for the facilitation of shoreline response activities can be sourced through State and National resources, inclusive of:

- DoT shoreline cleanup, flushing and site control capability
- National Plan stockpile hygiene container and beach sieves
- State Response Team and National Response Team personnel

Note: In any MOP incident the CA should firstly utilise their own resources, resources held by other agencies with relevant functional responsibilities, resources identified as part of any relevant OSCP/OPEP, or locally available resources to facilitate containment and recovery activities.

Activation of State or National resources to support containment and recovery activities is achieved via request from the CA to the SMPC for any actual or impending MOP incident where support is deemed necessary. If DoT is the CA, activation of DoT resources is through the DoT IC.

7.8.1. Shoreline Assessment

Shoreline assessment or Shoreline Clean-up Assessment Technique (SCAT) is a systematic method for surveying impacted or potentially impacted shorelines during a MOP incident. It allows for a systematic way to document the impacts on extensive areas of affected shoreline using standardised terminology to document shoreline oiling conditions. Shoreline assessment is designed to support decision-making for shoreline clean-up and is conducted by specifically trained teams, utilising equipment, and processes to enable the collection of reliable and consistent data. It is a regular part of spill response and shoreline response in particular, with assessments commencing early in a response to assess initial shoreline conditions, continuing throughout to monitor and verify impacts and clean-up effectiveness, then eventually allowing for final evaluations to ensure they meet clean-up endpoints.

The conduct of shoreline assessment involves the following key steps:

- Conduct reconnaissance survey(s).
- Sectorise and segment the shoreline.
- Assign teams and conduct SCAT survey(s).
- Submit survey reports to the IMT.
- Develop clean-up guidelines and endpoints.
- Monitor effectiveness of clean-up.
- Conduct post-clean-up inspection(s).
- Conduct final evaluation of clean-up activities.

The composition of a shoreline assessment team should include:

- Responders trained in the conduct of SCAT survey.
- Responders trained in the employment of information collection equipment (e.g. Drones or Sensors)
- Responders with local knowledge (e.g. Local or Indigenous Rangers)
- Responders trained in the identification of Oiled Wildlife (where applicable)

The differing types of shoreline assessment are:

- Pre-impact assessment
- Post-impact assessment
- Post clean-up assessment.

The key considerations for shoreline assessment are:

- Shoreline access
- Decontamination and Secondary Contamination Management
- Hazardous chemicals and atmosphere safety
- Sectorisation and segmentation
- Methods of shoreline assessment (on foot, using vehicles, by vessel, aerial)
- Trained personnel and data quality management
- Processing of information collected.

The basic information required to be collected as part of shoreline assessment is:

- Primary:
 - Shoreline description:
 - Shoreline type, substrate, and energy.
 - Biological character of shoreline.
 - Oil description and estimated volume.
 - Oil location, character, and behaviour.
- Additional information that may be required:
 - Access (foot, vehicle, vessel, air).
 - Site hazards and constraints.
 - Sensitive areas (environment and cultural).
 - Features / landmarks.
 - Potential sites for site control and waste.

Note: For any MOP incident in WA shoreline assessment should be conducted by trained personnel who have attained the Oiled Shoreline Response Course competencies. The WA DoT MEER Shoreline Assessment GIS Application or Form should be used for the collection of SCAT data as part of shoreline assessment.

7.8.2. Shoreline Clean-up

Shoreline clean-up is the application of techniques, personnel, and equipment to remove unoiled debris or material pre-impact or to remove oil and oiled debris or material from shorelines post impact. The differing options for the facilitation of shoreline response are applicable relative broadly to shoreline type. Table 11 below outlines the applicability of the various methods for shoreline response.

Table 11: Maximum boom deployment angles to flow direction for current strength to prevent escape of oil (ITOPF, 2023)

Shoreline Type		Clean-up Method										
		Natural Recovery	Manual Removal of Oil and Debris	Use of Sorbents	Mechanical Removal	Vacuum Recovery	Sediment Reworking	Low Pressure Washing / Flushing	High Pressure Washing	Use of Chemicals	Sand Blasting / Steam Cleaning	Bioremediation
Substrate	Form/ Exposure											
Bedrock	Cliff (exposed)	R		C								
	Cliff (sheltered)	R	C	C		C		R	R	C, A	C	
	Platform (exposed)	R	C	C		C		C	C	C, A	C	
	Platform (sheltered)	R	R	C		R		R	R	C, A	C	
Artificial	Seawalls/Jetties	C	C	C		C			C	C, A	C	
	Boulder Seawall	C	C	C		C		C	C	C, A		
Boulder	Beach (exposed)	R	R	C		C		C	R	C, A		C
	Beach (sheltered)	C	R	C		C		C	R	C, A		C
Cobble	Beach	R	R	C	C	C	R	C	C	C, A		C
Pebble	Beach	R	R	R	C	C	R	C	C	C, A		C
Gravel/grit	Beach	R	R	R	C	C	C	C		C, A		C
Coarse sand	Beach	C	R	R	R	R		C				C
Fine sand	Beach	C	R	R	R	R		C				C
Mud/ Silt	Intertidal Flats	C	C	C		C		C				C
	Mangroves/ Saltmarsh	R	C	C		C		C				C
Coral	Reef	R	C			C						

Key:

- A = Approval may be required
- R = Recommended. Preferred option
- C = Conditional. May be applicable

= Not recommended

As part of shoreline clean-up, the following broad clean-up options are available:

- Manual Collection
 - Shovels
 - Rakes
 - Hand scrapers
 - Sieves
- Mechanical Collection
 - Mobile plant (e.g. front-end loader)
 - Sieving machines
- Sorbents collection
- Vacuum Recovery
- Sediment reworking (high energy surf areas)
- Vegetation cutting (wildlife impact risks)
- Flushing
- Pressure washing.
- Cleaning agents (artificial shorelines only and requires specific approvals)

7.9. Oiled Wildlife Response

Oiled wildlife response is the application of techniques and resources to limit the impact of oil on wildlife and to manage impacted wildlife where feasible. Oiled wildlife response may take place as part of marine response or shoreline response and relies on the knowledge of wildlife specialists and the use of specialised equipment and established areas such as wildlife processing and care facilities.

The purpose of oiled wildlife response is to avoid impacts to wildlife from spilled oil however its effectiveness can be limited by conditions such as oil type, wildlife type/number and resource scarcity.

The management of oiled wildlife response in WA is overseen by DBCA and is outlined in the WA Oiled Wildlife Response Plan (WAOWRP). Any activities involving wildlife will typically require permits and this can be facilitated by DBCA.

As part of the WAOWRP, there are eight phases for oiled wildlife response, they are:

- Phase 1: Wildlife Reconnaissance
- Phase 2: Preventative Actions
- Phase 3: Wildlife Rescue
- Phase 4: Wildlife Field Processing
- Phase 5: Wildlife Intake
- Phase 6: Wildlife Cleaning
- Phase 7: Wildlife Rehabilitation
- Phase 8: Wildlife Release

The key considerations for the application of oiled wildlife response include:

- Availability of specialised equipment and facilities
- Trained wildlife responders
- Vulnerability of impacted or at-risk wildlife or associated habitats
- Community interest/concern and ethical factors
- Secondary contamination risks
- Spill trajectory and movement.
- Oil type.

Support for the facilitation of oiled wildlife response activities can be sourced through State and National resources, inclusive of:

- DBCA oiled wildlife advisor and oiled wildlife response personnel
- DoT managed specialist oiled wildlife response equipment, including oiled wildlife processing kit and washing container
- Some specialized systems such oiled wildlife washing container and specific detergent from National Plan

Note: Refer to the WAOWRP for further information of activities undertaken as part of Oiled Wildlife Response.

Activation of State or National resources to support oiled wildlife response activities is achieved via request from the CA to the SMPC for any actual or impending MOP incident where support is deemed necessary. If DoT is the CA, activation of DoT resources is through the DoT IC.

*Where DBCA support and activation of the WAOWRP is required, the SMPC will facilitate this initially via a phone call to the DBCA State Duty Officer: **08 9219 910***

7.9.1. Oiled Wildlife Advisor and Wildlife Response Coordinator

Included in the WAOWRP is provisions for the role of the Oiled Wildlife Advisor (OWA) and Wildlife Coordinator (WC). These roles are fulfilled by DBCA and are there to advise the IMT on behalf of DBCA for the management of Oiled Wildlife Response and the implementation of the WAOWRP. As part of this they:

- Oiled Wildlife Advisor:
 - Report to the Incident Controller and work to support the Planning and Logistics Functions.
 - Coordinate strategic aspects of DBCA response.
 - Identify issues affecting the delivery of Oiled Wildlife Response and promote their resolution.
 - Provide advice on resources and support available from DBCA.
 - Have Good knowledge of DBCA incident response resources and processes.
 - Have exceptional knowledge of Oiled Wildlife Response processes and strategies.
- Wildlife Coordinator:
 - Report to the Operations Officer and work to support Operations Function.
 - Manage, coordinate, and supervise all Wildlife Unit operations.
 - Deliver timely, effective, and humane management of wildlife affected by the incident.
 - Determine and implement wildlife response tactics to achieve the objectives of the IAP.
 - Have Wildlife management experience and local/regional wildlife knowledge.
 - Have experience in incident response and Oiled Wildlife Response.
 - knowledge of DBCA incident response resources and processes.
 - Have knowledge of OWR resources & equipment requirements.

7.9.2. Oiled Wildlife Field Processing Facility and Primary Care Facility

Included in the WAOWRP are details for the required facilities for effective Oiled Wildlife Response, these include the requirements for a field station for wildlife processing and a primary care facility for wildlife treatment. In support of DBCA, DoT maintains some Oiled Wildlife Response equipment in the state stockpiles, arranged to be able to support the following:

- Oiled Wildlife Response Trailer able to support establishment of a field station for wildlife processing.
- Oiled Wildlife Washing Container able to be part of the establishment of a primary care facility.

7.10. Cultural and Heritage Management

Culture and heritage management is the incorporation of local and traditional knowledge to limit the impact of oil and resultant response activities on cultural and heritage values or resources. Culture and heritage management may take place as part of marine response or shoreline response and relies on the incorporation of local knowledge and local concerns.

The key purpose of culture and heritage management is to avoid impacts to culture and heritage from response activities where feasible and to mitigate impacts to culture and heritage from spilled oil. The effectiveness of culture and heritage management can be severely limited however by not engaging with the correct stakeholders and failing to incorporate or understand specific cultural or heritage needs or concerns.

Successful culture and heritage management requires the following key activities:

- **Identify:** Determine the relevant stakeholders to culture and heritage management
- **Include:** Incorporate local knowledge into incident management decision making and response resources
- **Understand:** Identify and appreciate the culture and heritage relationships with the impacted marine/coastal environment
- **Consult:** Provide appropriate equity for community involvement in setting direction and management actions
- **Maintain:** Ensure that the protection of cultural and heritage values/resources are maintained in the management of the incident and conduct of response activities
- **Inform:** Educate the community and relevant stakeholders on the risks and prognosis of the incident to manage expectations related to outcomes for protection of culture and heritage

Cultural and heritage values or resources can include:

- Indigenous lands and culture
- Unique natural landmarks
- Maritime heritage (e.g. shipwrecks, piers, etc)
- Coastal communities

Support for the facilitation of culture and heritage management can be sourced through State arrangements pertaining to Local Emergency Management Committees, Native Title Management, Heritage Management, and incorporation of local knowledge, such as:

- Establishment of an Incident Support Group and incorporation of any relevant Local Emergency Coordinator into the IMT
- Incorporation of liaison officers or advisors from any relevant Local Authority and/or Designated Local Aboriginal Cultural Heritage Service into the IMT
- Incorporation of Local Rangers or Indigenous Rangers into Response Teams
- Consideration of culture and heritage components as part of protection priority determination, resources at risk determination and response activities impact management

Activation of State resources to support culture and heritage management is achieved via request from the CA to the SMPC for any actual or impending MOP incident where support is deemed necessary.

Support to determine relevant stakeholders can also be sought through agencies such as:

- *Department of Planning, Lands and Heritage*
- *Local Aboriginal Cultural Heritage Services*
- *Heritage Council of WA*
- *Local Government Authorities*

7.10.1. Consultation

Consultation is vital to effective culture and heritage management. Once relevant stakeholders have been identified and culture and heritage management issues are being understood, consultation is the mechanism to ensure an agreeable approach can be achieved for the maintenance of cultural and heritage values/resources as part of a response. The purpose of consultation in response is to:

- Further investigate issues.
- Gain an understanding and appreciation of the issues.
- Negotiate on the management of issues.
- Mutually develop the procedures for the management of issues.

Consultation should include the following key steps and include engagement with all identified relevant stakeholders for the issue(s) requiring consultation:

- Stage 1: Preparation – Determine what is the need for consultation and with who.
- Stage 2: Initial Meeting – Facilitate two-way education on the issues and manage effective recording of stakeholder concerns/needs.
- Stage 3: Negotiation – Facilitate two-way education on the issues and achieve clear and unambiguous communication towards an agreed outcome/proposal.
- Stage 4: Settlement – Ensure common understanding and recording of clear outcome from consultation and determine procedures and management/response options aligned to consultation settlement.
- Stage 5: Implement agreed approach – Collaboratively implement consultation settlement and associated procedures and response options.

Note: Consultation can be time consuming and is not necessarily feasible as part of the initial response to an incident. Furthermore, consultation cannot result in outcomes that are incongruent with the state strategic control priority of “PROTECTION AND PRESERVATION OF LIFE”. Ideally, for initial response, consultation will have already occurred as part of the development of pre-determined contingency plans where applicable.

7.11. Waste Management

Waste management is the safe handling of collected oil and oily waste from collection to disposal. Waste management is part of Marine, Shoreline and Oiled Wildlife response operations and relies on the use of specific waste handling equipment and techniques. The key purpose of waste management is to sustain ongoing waste producing response activities, avoid secondary contamination and resolve the incident through effective management of spilled oil once collected however its effectiveness can be severely limited by conditions such as waste type(s) and volume, and logistical constraints. Table 12 below summarises indicative operational constraints for containment and recovery options:

The key considerations for the application of waste management include:

- Controlled/Hazardous waste approvals.
- Reduction of waste volumes
- Segregation of waste types
- Secondary contamination risks
- Facilitation of ongoing response activities
- Availability of waste storage
- Final treatment/disposal options
- Tracking waste volumes and handling
- Ongoing sampling to confirm waste properties.

Support for the facilitation of waste management can be sourced through State and National resources, inclusive of:

- Waste management advice and approvals via DWER
- DoT site control capability
- Various National Plan stockpile waste transfer and temporary waste storage options
- Industry waste management capabilities (including storage, transportation, treatment, and disposal)

Note: In any MOP incident the CA should firstly utilise their own resources, resources held by other agencies with relevant functional responsibilities, resources identified as part of any relevant OSCP/OPEP, or locally available resources to facilitate containment and recovery activities.

Activation of State or National resources to support waste management activities is achieved via request from the CA to the SMPC for any actual or impending MOP incident where support is deemed necessary. If DoT is the CA, activation of DoT resources is through the DoT IC.

7.11.1. Waste Advisor

During any level 2/3 MOP Incident, a waste advisor can be requested. This role is fulfilled by DWER and is there to advise the IMT on behalf of DWER for the management of waste and the compliance with the controlled waste regulations. As part of this they:

- Report to the Incident Controller and work to support the Planning and Logistics Functions.
- Coordinate strategic aspects of waste management, including licencing and approvals.
- Identify issues affecting the management of waste and promote their resolution.
- Provide advice on resources and support available from DWER.
- Have Good knowledge of controlled waste regulations.

Note: Further information on the management of controlled waste can be found on the DWER Controlled Waste website for the Environmental Protection (Controlled Waste) Regulations 2004.

7.11.2. Collection

When waste is collected, to aide in the ongoing management of waste it needs to be segregated. Segregation allows for effective transportation, treatment, and final disposal. If hazardous controlled waste is mixed with non-hazardous or controlled waste the entire waste stream must be treated as hazardous or controlled.

Any sites where waste is being collected or handled must be managed under site control provisions for contaminated sites. This includes provisions for decontamination and personnel protective equipment, and arrangements to limit secondary contamination and safety risks in the handling of oily waste.

Table 12: Recommended Segregation of Waste during an MOP (DoT, 2023)

Field Segregation		Preferred segregation
Liquid	Oils	Non emulsified oils
		Emulsified oils
	Wastewater	Water from temporary storage
		Water from heat or gravity separation of emulsions
		Water from chemically de-emulsified oil
Solid	Oils	High pour point oils
		High viscosity emulsions
		Tar balls
	Oily debris	Oil mixed with cobble or sand
		Oil mixed with inorganic debris (plastics, sorbents)
		Oil mixed with organic debris (wood, vegetation)
	Inert waste	Non-oiled putrescibles wastes; Inert materials, e.g. plastics, woods, paper

7.11.3. Transportation and Transfers

Waste management will require the transport of waste, initially from the point of collection and then potentially between storage locations before final treatment and disposal. Any transportation of waste must conform to regulatory requirements for waste transport and associated waste packaging requirements. In general, for the transportation of waste, the following should be considered:

- All liquid oily wastes are considered controlled wastes and must be transported by licensed carriers.
- Solid wastes will require sampling to determine if they are classed as a controlled waste.
- Solid wastes NOT suitable for disposal at Class I, II and III landfills are considered controlled waste and must be transported by licensed carriers.
- Solid wastes suitable for disposal at Class I, II and III landfills are NOT considered controlled waste and can therefore be transported without requirements for controlled waste management.

As part of any transportation of waste, transfers will be required. Transferring oil from one container to another is a high-risk point and procedures should be implemented to minimise risk of spillage and secondary contamination as part of waste transfers. In general, for the transfer of waste, the following should be considered:

- Transfers on land should occur at appropriate sites with bunded transfer/loading zones. Access to these areas should accommodate transfers without hindering other activities and these sites require approval from DWER.
- Transfers on water should occur within boomed or bunded areas to contain any unexpected spillage and for liquid waste follow a similar process to refuelling operations.

Waste tracking is vital to maintain flow of waste from collection sites. Tracking also provides a clear auditable account of the incident to ensure the waste is managed in an environmentally acceptable manner. Controlled waste transportation and transfers must be tracked using a Controlled Waste Tracking Form (CWTF).

7.11.4. Temporary Storage

Effective waste management should not hinder recovery operations. Once oily waste has been collected, in most instances it will be necessary to store it temporarily to allow recovery operations to continue as permits and approvals are administered and to account for the slow processing time associated with final treatment and/or disposal. Wastes awaiting final disposal must be stored in an environmentally acceptable manner and in compliance with the Environmental Protection Act. Also, wherever possible, containers should be covered to prevent rain entering and spillage or overflow.

The establishment and operation of temporary waste storage sites will require approvals and administration under relevant environmental protection regulations. The Waste Advisor can assist in meeting regulatory requirements for these. Local authorities can also assist in determining and achieving compliance for the establishment of temporary waste storage sites. Once a site has been established as a temporary waste storage site, planning should include arrangements for its eventual restitution.

The following are the key considerations for the establishment of temporary waste storage sites:

- Environmental pollution
- Oil migration through the soil.
- Groundwater contamination
- Surface water runoff of oily material
- Washout of disposal area due to floods
- Long term effects on vegetation
- Site control and security requirements
- Operational problems (availability of all-weather access roads, and ease of construction)
- Social, Institutional, and legal problems (approvals, adverse public reactions, lack of resources, time to secure suitable sites)

Land that is potentially suitable as a temporary waste storage site includes:

- Federal land
- Crown land
- Military owned land
- State land.
- Highway projects
- State reserves.
- Waste disposal sites active/inactive.
- Port Authority owned land
- Coastal reserves
- Forestry/Agricultural lands
- Oil or mining company property or leases.
- Industrial waste disposal sites
- Utility company property

Land that should be avoided as a temporary waste storage site includes:

- Critical Habitat for threatened species.
- Wildlife refuge areas.
- National Parks.
- World Heritage Areas.
- Water courses.
- Previously contaminated areas.
- Areas that are permanently or seasonally waterlogged or require artificial drainage.
- Areas below the 1 in 100-year flood contour
- Areas that are within priority public drinking water source areas.
- Areas within wellhead protection zones and reservoir protection zones.

7.11.5. Treatment and Disposal

Treatment and disposal options for waste generated as part of an MOP incident will depend on the types of waste generated. The process of determining suitable options will need to be supported by waste sampling to aid in confirming the correct classification of waste. Licenced waste management companies and DWER can assist in appraising suitable treatment and disposal options however DWER should always be consulted for the consideration of waste treatment disposal in any Level 2/3 MOP incident.

The general options for waste treatment include:

- Recycling
- Bioremediation
- Separation

The general options for waste disposal include:

- Incineration
- Landfill

The Waste Advisor can assist with determining and managing options around the final disposal of waste.

Note: For landfill, DWR’s Landfill Waste Classifications and Waste Definitions 1996 provide information on acceptable classes of waste for landfill and the types of sites where they can be disposed. In general, most waste will need to go to a Class III or IV landfill (DWER, 2019) of which there are only a small number in WA.

Table 13: Waste Disposal Options (DoT, 2023)

State / Class		Material	Temporary Treatment	Final Treatment option (Reuse, recycle, dispose)
Liquid	Oils	Recovered liquid oily waste; oil mixtures e.g. recovered oil, separated fractions	Gravity separation from water	Refinery feedstock (Salt content less than 0.1%) Blending into Fuel Oil (Salt content less than 0.1%) Incineration
		Emulsified oils	Emulsion breaking heat treatment (60-66 degrees – Max 80 degrees)	Refinery feedstock (Salt content less than 0.1%) Blending into Fuel Oil (Salt content less than 0.1%)

State / Class		Material	Temporary Treatment	Final Treatment option (Reuse, recycle, dispose)
			emulsion breaking chemicals (0.1-0.5% by volume) * Mechanical separation	Incineration
	Waste water	Oily waste water: predominant water mixtures e.g. rinsates, separated fractions	Oily water separator Gravity separation release water at spill site	Remediation before discharge into environment CONSIDER CHEMICAL ADDITIVES BEFORE RELEASE
Solid	Oils	Tar balls. High pour point oils High viscosity emulsions	Sieving	Incineration Direct disposal - Class IV landfill
	Oily debris	Oil mixed with cobble or sand	Sieving Washing with water or solvent	Land farming. Bioremediation Incineration Stabilisation with organic material such as quicklime or fuel ash waste Direct disposal - Class IV landfill (or treated for Class I, II or III acceptance)
		Oil mixed with organic debris (wood, vegetation)	Draining liquid oil Washing with water or solvent	Land farming. Composting Incineration Stabilisation with organic material Direct disposal - Class IV landfill (or treated for Class I, II or III acceptance)
		Oil mixed with inorganic debris (plastics, sorbents)	Washing with water or solvent	Direct disposal - Class IV landfill (or treated for Class I, II or III acceptance) Incineration
	Inert waste	Non-oiled putrescibles wastes; Inert materials, e.g. plastics, woods, paper	Segregate organic from inorganic	Composting Landfill Class I, II or III

7.12. Simultaneous Management of Other Hazards

Simultaneous Management of Other Hazards is the facilitation of response activities to a non-MOP specific component as part of an overall MOP incident. An MOP incident may happen simultaneous to

other issues such as MTE, Fire, HAZMAT, etc. but all remain under the coordination of arrangements outlined for an MOP if that is the hazard presenting the greater risk. Where multiple hazard types are occurring that present differing technical demands for their management the following options are possible:

- Management of each hazard component under separate ICs and IMTs and apply a “Unified Command” arrangement under the designated CA.
- Management of each hazard component as a separate division, all under the control of a single IC and IMT designated by the CA (Note: response division can be defined either geographically or functionally)
- Employment of relevant technical experts (e.g. Fire Fighter for Fire component) to lead the division of responsibilities for each hazard (as IC if separate IMTs or Division Commander if separate divisions)
- Employment of relevant Liaison Officers to facilitate effective communications between areas managing differing hazard components to maintain unity of command and suitable coordination.
- Employment of the SMPC as an OAM (supported by the MEECC and OSAG) where multiple ICs and IMTs exist.

Note: Generally, facilitation of coordination of differing hazard components should be pushed as low as possible to avoid control complexity (e.g. avoid two ICs or IMTs for a single event). For a single event, the State EM Framework requires it that only one CA will be identified.

7.12.1. Maritime Casualty Coordination

As part of an MOP incident, there may be the requirement to coordinate the management of a maritime casualty, but it has not also resulted in a Marine Transport Emergency (MTE). Where the management of a maritime casualty is required, options can be implemented:

- Appoint a Maritime Casualty Coordinator
 - Reports to the Incident Controller and oversees the management of a maritime casualty.
 - Has experience in maritime casualty management and the processes and arrangements for maritime casualty management.
- Establish a Maritime Casualty Coordination Unit (MCCU) as part of the Incident Management Team.
- Implement and conduct a maritime casualty management process in parallel to the broader management of the MOP incident.

Cross stakeholder communications and actions are the foundation for effective Maritime Casualty Management aligned to the principle that operational management of a Maritime Casualty, and ultimate responsibility, rests primarily with the ship owner/operator and, by extension, the commercial sector (i.e. towage and salvage contractors)

Note: Although the Management of a Maritime Casualty may not constitute a Marine Transport Emergency, referral to the AMSA Guidelines on the Management of a Maritime Casualty or the WA IMP – Marine Transport Emergency can assist in the facilitation of Maritime Casualty management.

8. Response Capability

This section outlines the resources available at a State and National level to facilitate response strategies as part of an MOP incident in WA.

8.1. State Resources

8.1.1. MEER Team

The MEER Team is comprised of eight personnel from DoT, who are experts in Incident Control, MOP Response Planning, Logistics and Operations, and MOP environmental impact management. The Team's role is to support DoT to meet its obligations as a HMA. As such they are the central capability for the management of MOP incidents in WA. Overall, they seek to collaboratively build and maintain awareness and capabilities to prevent, prepare for, respond to, and recover from MOP incidents throughout WA. They also facilitate the management of this plan and the provision of the 24/7 'MEER Duty Officer' service.

*The MEER Team is contactable via the email marine.pollution@transport.wa.gov.au or if urgent contact is required, by calling the MEER Duty Officer on **08 9480 9924**.*

8.1.2. Maritime Incident Management Team

The MIMT is comprised of over one hundred personnel from DoT and other State Government organisations who are trained to perform roles within an IMT for an MOP incident. People in the MIMT are trained across the broad IMT areas of Planning, Logistics, Operations, Intelligence, Public Information, Finance, Liaison, Investigations, Safety and Recovery.

Note: Further information on the composition and administration of the MIMT is outlined in DoT's MIMT Policy and State Capability Map.

Activation of individuals from the MIMT during an MOP incident is through the DoT IC if DoT is the CA, or through the SMPC otherwise.

8.1.3. State Response Team

The SRT is comprised of over fifty personnel from DoT, other State Government organisations and elected external organisations (including Port Authorities) who are trained to establish and perform field response operations for an MOP incident. People in the SRT are trained across the broad areas of impact assessment, basic MOP equipment operations, advanced MOP equipment operations, small vessel operations, contaminated site management, and field operations leadership, safety, and coordination.

Note: Further information on the composition and administration of the SRT is outlined in DoT's SRT Policy and State Capability Map.

Activation of individuals from the SRT during an MOP incident is through the DoT IC if DoT is the CA, or through the SMPC otherwise.

8.1.4. State Response Equipment

The SRE is comprised of specialist marine pollution response equipment, stockpiled, and maintained to be mobilised and utilised as part of field response operations for an MOP incident. Equipment in the SRE Stockpiles can be utilised in shoreline and nearshore (coastal) areas to conduct incident appraisal, and oil spill response or clean-up activities during an MOP incident (including sampling, booming, skimming, flushing, shoreline clean-up, site control, decontamination, communications, waste handling, oiled wildlife management, and response coordination or sustainment).

Note: Further information on the composition and administration of the SRE is outlined in DoT's SRE Policy and State Capability Map.

Activation of response kits, general equipment, and response supplies from SRE Stockpiles during an MOP incident is through the DoT IC if DoT is the CA, or through the SMPC otherwise.

8.1.5. DWER Pollution Response Team

As part of its functional responsibilities, DWER maintains a Pollution Response Team which comprises a small number of specialists, able to mobilise to an incident site and provide support for detecting and monitoring discharges of hazardous materials. In addition to this, they can also provide specialist advice on waste management and safety related to hazardous materials.

Note: If the Pollution Response Team is unable to support, DFES Career Fire and Rescue or Volunteer Fire and Emergency teams can provide an alternative for the provision of support for detecting and monitoring hazardous materials.

Requests for activation of the Pollution Response Team during an MOP incident is through the DoT IC if DoT is the CA, or through the SMPC otherwise.

Requests are made to the Pollution Response Team Duty Officer.

8.1.6. Oiled Wildlife Response

As part of its functional responsibilities, DBCA maintains the WA Oiled Wildlife Response Plan and in support of it a network of trained Oiled Wildlife Responders who can mobilise to an incident site and provide support for the management of Oiled Wildlife. In addition to this, and in collaboration with DoT a small quantity of specialist oiled wildlife response equipment is also stockpiled and maintained to be mobilised and utilised as part of oiled wildlife response operations for an MOP incident.

Note: Further information on Oiled Wildlife Response is outlined in WA Oiled Wildlife Response Plan.

Requests for the activation of the WA Oiled Wildlife Response Plan during an MOP incident is through the DoT IC if DoT is the CA, or through the SMPC otherwise.

Requests are made to the DBCA State Duty Officer or DBCA Oiled Wildlife Advisor.

8.1.7. Air Observer / Air Attack Supervisor

To facilitate the conduct of Air Operations as part of an MOP incident, DoT has a relationship with DFES for the supply of Air Observers and Air Attack Supervisors as part of a MOP Incident where they are not otherwise engaged in fire hazard management. This is sustained through access of DFES Air Attack Supervisors to AMSA 'Oil on Water' online training. Where DFES cannot support, trained observers from the local Offshore Petroleum Industry and utilisation of locally available aircraft are exploited to support Air Operations during a MOP incident.

Requests for the activation of the Air Observers and Air Attack Supervisors during an MOP incident is through the DoT IC if DoT is the CA, or through the SMPC otherwise.

Requests are made to either DFES or the Offshore Petroleum Industry as relevant.

8.2. National Resources

8.2.1. National Response Team

The NRT comprises experienced personnel who can be seconded from Australian Government/State/Territory Agencies to perform a range of incident management or response roles. NRT members are managed, trained, and seconded through AMSA and its purpose is to provide a surge capacity to support controlling agencies responding to major MOP incidents.

Note: Further information on the composition and administration of the NRT is outlined in the National Plan.

Requests for the activation of the NRT during an MOP incident is through the SMPC.

Requests are made to the AMSA Pollution Response Duty Officer.

8.2.2. National Plan Equipment

National Plan response equipment is owned and maintained by AMSA and in WA is stockpiled in Karratha and Fremantle. National Plan dispersant stocks are also stored with these stockpiles. Equipment in the National Plan Equipment Stockpiles can be utilised in shoreline and nearshore (coastal) and offshore areas to conduct oil spill response or clean-up activities during an MOP incident (including, booming, skimming, site control, decontamination, waste storage and handling, dispersant application and oiled wildlife washing).

Under the mutual aid arrangement of the National Plan, equipment owned by other States/Territories can also be requested during an MOP incident through the SMPC.

Note: Further information on the composition and administration of National Plan Equipment is outlined in the National Plan.

Requests for the activation of National Plan Equipment during an MOP incident is through the SMPC.

Requests are made to the AMSA Pollution Response Duty Officer.

8.2.3. Fixed Wing Aerial Dispersant Capability

AMSA have established a Fixed Wing Aerial Dispersant Capability for the application of oil spill dispersants. The capability is jointly funded by the Australian Institute of Petroleum (AIP) through the AMOSC and includes an aircraft located in Ballidu, WA. The capability is designed to complement dispersant spraying arrangements using vessels through use of large agricultural fixed wing aircraft to apply oil spill dispersants.

Note: Further information on the composition and administration of the Fixed Wing Aerial Dispersant Capability is outlined in the National Plan.

Requests for the activation of the Fixed Wing Aerial Dispersant Capability during an MOP incident is through the SMPC.

Requests are made to the AMSA Pollution Response Duty Officer.

8.3. Industry Resources

Each Petroleum Titleholder or Facility Operator is required to hold and maintain a stockpile of equipment commensurate with their identified risk as outlined in their relevant OSCP/OPEP. In addition to this, AMOSC holds and maintains a stockpile of equipment commensurate to their obligations to AMOSC members, including stockpiles in Fremantle, Exmouth, and Broome. Beyond equipment, AMOSC also manages the Industry Core Group which comprises experienced personnel who can be seconded from industry to perform a range of response roles during an MOP incident.

Where appropriate, industry equipment and personnel can be accessed during a MOP incident where either the relevant Petroleum Titleholder or Facility Operator has functional responsibilities or under National Plan arrangements and the associated AMOSPlan.

Requests for the activation of Industry Resources during an MOP incident is through the SMPC.

Requests for AMOSC related resources are made to the AMSA Pollution Response Duty Officer.

8.4. Volunteers, Labour Hire and Contractors/Contracts

8.4.1. Volunteer Management

In the context of a MOP incident, volunteers are divided into two categories, as follows:

- **Spontaneous volunteers:** Those who seek to contribute on impulse – people who help following a disaster and who are not previously affiliated with recognised volunteer agencies and may or may not have relevant training, skills, or experience.
 - The highest priority during a MOP incident is the health and safety of people. Oil, chemicals, and other hazards associated with the response and clean-up of a MOP incident can pose significant health and safety risks, as a result spontaneous volunteers are not normally engaged to support the response.

If DoT is the CA, those who are a spontaneous volunteer will thus be referred to any arrangements related to affiliated volunteers or labour hire engagement if they are in place as an option to provide support.

- **Affiliated volunteers:** People who have an association with an official response agency and who may have relevant training, skills, or experience, this includes non-DoT members of the SRT, volunteers as part of established volunteer emergency services (e.g. State Emergency Service) and volunteers with recognised wildlife rescue and rehabilitation organisations.
 - All affiliated volunteers engaged as part of an MOP incident must be verified by their associated volunteer organisation (or workplace for SRT Members) as being suitably fit, trained, and qualified to undertake a role safely in an MOP response.
 - All affiliated volunteers engaged as part of an MOP incident must undergo an incident registration and induction as part of their mobilisation and involvement in the response, and as part of that must comply with all confidentiality and site safety or control agency safety management requirements for the response.
 - All affiliated volunteers should be protected through their associated volunteer organisation (or employer for SRT members) from personal civil liability or for personal injury caused by acts made in good faith and without recklessness, while carrying out work as an affiliate volunteer and as part of relevant Safety Management Systems (SMS) during a response.

If DoT is the CA, those who are an affiliated volunteer will be mobilised and inducted into the response as per mobilisation arrangements outlined earlier and will have to comply with requirements outlined in the DoT MEER SMS.

8.4.2. Labour Hire Arrangements

In the context of a MOP incident, where additional labour is required, labour hire arrangements through a Labour Hire Company will be engaged. Labour hire will be limited to the supply of personnel for general or non-technical response duties such as manual shoreline clean-up. Where labour hire is engaged, the CA should make the following provisions:

- All hired labour engaged as part of an MOP incident must be verified by the Labour Hire Company as being suitably fit and capable to undertake a role safely in an MOP response.

- The controlling agency must provide a clear job description for the engagement of appropriate labour hire, inclusive of requirements to undertake registrations, inductions, basic-training and to comply with all confidentiality and stipulated site safety or control agency safety management requirements.
- All hired labour are protected through their associated labour hire agreement from personal civil liability or for personal injury caused by acts made in good faith and without recklessness, while carrying out work and as part of relevant SMS during a response.

If DoT is the CA, hired labour will be engaged via established common user agreements for labour hire services to the DoT and the WA Government.

Hired labour will be mobilised and inducted into the response as per mobilisation arrangements outlined earlier and they will have to comply with requirements outlined in the DoT MEER SMS.

8.4.3. Contractors and Contracted Capability

In the context of a MOP incident, pre-existing response capabilities can be supplemented where necessary through engagement of contractors or contracted capability/services. Where this is required, the CA can establish contracts as required. Where contractors or contracted capability/services are engaged, the CA should make the following provisions:

- All contractors engaged as part of an MOP incident must be verified by their own organisation as being suitably fit and capable to undertake a role safely in an MOP response.
- The controlling agency must provide clear contractual terms for the engagement of contractors or contracted capability/services, inclusive of requirements to undertake registrations, inductions, and to comply with all confidentiality and site safety or control agency safety management requirements.
- All contractors should be protected through their associated own organisation and contract terms from personal civil liability or for personal injury caused by acts made in good faith and without recklessness, while carrying out work and as part of relevant SMS during a response.

If DoT is the CA, contracts will be engaged under normal DoT and the WA Government contract governance requirements, inclusive of emergency provisions and exemptions where necessary.

Where appropriate, contractors or contracted capability will also be mobilised and inducted into the response as per mobilisation arrangements outlined earlier and they will have to comply with requirements outlined in the DoT MEER SMS.

9. Support Arrangements

This section outlines the support available at a State and National level to enable response strategies as part of a MOP incident in WA. It also highlights the various tools and analysis options to support sound decision making as part of the management of a MOP incident in WA.

9.1. State Capabilities

9.1.1. Incident Management Team Advisors

During a Level 2/3 MOP incident where DoT is not the CA, support is available to the IC and IMT of the Port Authority that is the CA in the form of “IMT Advisors”. These are suitably trained and experienced individuals from DoT as the HMA / JA that can mobilise and integrate into the Port Authority IMT to in the functions of Control/Planning, Operations/Logistics and Intelligence/Environmental. The role of these advisors is to offer advice to the IMT on matters pertaining to effective MOP incident management and to support the activities of the relevant IMT functions through filling supporting roles as required (but not functional lead roles). Support from IMT Advisors can either be facilitated in person or virtually.

Activation of IMT Advisors is achieved via request from the CA to the SMPC for any actual or impending Level 2/3 MOP incident where support is deemed necessary.

9.1.2. Operations Coordinators and Staging Coordinators

During a Level 2/3 MOP incident where DoT is not the CA, but state or national resources are mobilised in support, assistance is available to the IC and IMT of the Port Authority that is the CA in the form of ‘Operations Coordinators’ and ‘Staging Coordinators’. These are suitably trained and experienced individuals from DoT as the HMA / JA that can mobilise and integrate into the Port Authority field operations components to support the coordination of State/National Resources and their response activities and staging specifically. The role of these coordinators is to offer advice to the field operations components on matters pertaining to effective MOP response operations, facilitate the effective arrival of state and national resources to the incident, and support the activities of the operations function through filling supporting roles that are field orientated as required (such as sector commander or team leader). Support from Operations Coordinators and Staging Coordinators can only be facilitated in person.

Activation of the Operations Coordinators and Staging Coordinators is achieved via request from the CA to the SMPC, or by determination of the SMPC without need for a request for any actual or impending Level 2/3 MOP incident where state or national resources are mobilised in support.

9.1.3. Incident Support Group

During a Level 2 MOP incident the CA must consider the establishment of an Incident Support Group (ISG), and during a Level 2 MOP incident the CA must establish an ISG. The function of the ISG is to assist the IC through the provision of information, expert advice, support, and resources relevant to their organisation. The Composition of the ISG must include a Chair (generally the IC) appointed by the CA, any relevant Local Emergency Coordinators (a person appointed in each local government district who assists in ensuring a coordinated response at a local level) and representatives (liaison officers) from agencies and community organisations directly involved in the response to and recovery from the MOP incident. ISG meetings can either be facilitated in person or virtually.

Activation of the ISG is achieved via email to required members/agencies from the IC (or the nominated Chair, if different to the IC) for any actual or impending MOP incident ahead of any required convening.

9.1.4. Environmental Liaison Group

During a MOP incident, the CA may seek support from the Environmental Scientific Coordinator (ESC) for the provision of expert, defensible and timely “whole of government” advice to the IC and CA on priorities for environmental protection and on the appropriateness of proposed response strategies.

During a Level 2/3 MOP incident the ESC will establish the Environment Liaison Group (ELG) on behalf of the CA to support them in the provision of advice. Where providing support, the ESC should be part of an ISG if established, along with members of the ELG where necessary. ELG meetings can either be facilitated in person or virtually.

Activation of the ESC is achieved via request through the SMPC for any actual or impending MOP incident where expert, defensible and timely “whole of government” advice is required. Activation of the ELG is at the discretion of the ESC.

9.1.5. Oiled Wildlife Advisor

During a MOP incident where there is a potential, imminent or actual impact to wildlife the DBCA Oiled Wildlife Advisor (OWA), is the strategic point of contact who provides advice, support, and planning input on oiled wildlife response for the CA. The OWA will work with the IC or the CA to determine the magnitude of the wildlife impact and activate plans and resources as required, based on particulars of the incident and arrangements outlined in the WA Oiled Wildlife Response Plan (WAOWRP) that is administered by DBCA. Support from the OWA can either be facilitated in person or virtually.

*Activation of the OWA is achieved via request from the CA for any actual or impending MOP incident where there is a potential, imminent or actual impact to wildlife. Activation of the OWA is specifically achieved by contacting the DBCA State Duty Officer on **08 9219 9108**, who will then undertake to notify the OWA as soon as possible.*

When requesting support from the OWA, the SMPC should also be informed of the requirement.

9.1.6. Operational Area Support Group

During a Level 2/3 MOP incident the SMPC may establish an Operational Area Support Group (OASG). This will occur if the incident has escalated to a point where an emergency declaration is required, or if the SMPC is also fulfilling the role of an Operational Area Manager (OAM). The purpose of the OASG is to provide strategic support to the emergency response when multiple agencies need to be coordinated at a district level or multiple incidents are occurring simultaneously within one operational area. The role of the OASG is to assist the OAM to provide strategic management of the incident(s) through provision of agency specific information, expert advice, resources, and support. The OASG should also include the relevant District Emergency Coordinator (a person appointed in each emergency management district who assists in ensuring a coordinated response at a district-level). OASG meetings can either be facilitated in person or virtually.

Activation of the OASG is achieved via email to required members/agencies from the SMPC or the MEECC for any actual or impending MOP incident ahead of any required convening.

9.1.7. Public Information Management

The management of Public Information during an MOP incident is the responsibility of the CA however the SMPC is the default state spokesperson for MOP incidents. Where DoT is not the CA, the SMPC may appoint a Media Liaison Officer to mobilise into the other agency/authority incident management structure. The role of the Media Liaison is to provide a direct liaison between the DoT Media/Communications Team and the other CA's Media/Communications Team and/or IMT Public Information Function, and to assist in the release of conduct of joint media statements or activities. They can also assist in matters pertaining to the facilitation of information and warnings for the incident.

Where DoT is the Controlling Agency, public information management will simply be managed by the Public Information Function of the Incident Management Team, supported by the DoT Media/Communications Team and the MEECC as per arrangements outlined in SHP-MEE and the MEER Incident Management System (IMS).

Activation of a Media Liaison Officer is at the discretion of the SMPC, via email or phone call to the relevant officer from the SMPC or the MEECC as soon as practical once the requirement of a Media Liaison Officer is identified.

Additional support is available for the management of Public Information through activation of the State Support Plan – Emergency Public Information. This plan is managed by the State Emergency Public Information Coordinator with oversight from the SEMC Public Information Reference Group. The plan outlines the arrangements for whole of government provision of accurate, coordinated, timely and accessible information on an emergency to the community and the media. Regardless of activation of the State Support Plan – Emergency Public Information, DoT as the HMA remains involved in supporting and facilitating the public information function for an MOP Incident.

Activation of the State Support Plan – Emergency Public Information is achieved by request and agreement from the SMPC to the State Emergency Public Information Coordinator.

9.1.8. Emergency Relief and Support Management

Arrangements for the management of welfare services in WA are outlined in the State Support Plan – Emergency Relief and Support (previously Emergency Welfare). This plan is managed by the Department of Communities (Communities), who is the organisation responsible for the support function of providing and coordinating Relief and Support services. Relief and Support services are the provision of immediate and ongoing supportive services to alleviate, as far as practicable, the effects on people affected by an emergency. All provisions of the plan are unlikely to be relevant in the context of an MOP incident, however areas such as Personal Support Services and Financial Assistance may be.

Activation of the State Support Plan – Emergency Relief and Support is achieved by request and agreement from the SMPC to the Department of Communities State Relief and Support Coordinator (previously State Welfare Coordinator).

9.1.9. State Emergency Coordinator and State Emergency Coordination Group

The State Emergency Coordination Group (SECG) is chaired by the State Emergency Coordinator (SEC) or their delegate and is established, during a state of emergency, or may be established where an emergency occurs or is imminent, to ensure the provision of a strategic, coordinated multi-agency response to and recovery from the emergency and for reporting to the Minister. Arrangements for the SECG and emergency coordination in general are outlined in the State Emergency Management Plan. The SEC and SECG sit above the HMA in emergency coordination structures.

Activation of the SEC and SECG are achieved through notification from the SMPC on behalf of the HMA for an MOP incident. The SEC is only required to be notified by the CA when a Level 2 incident has the potential to escalate to a Level 3, or when a Level 3 incident is declared.

9.1.10. Funding Support

As per State EM framework requirements, DoT as the HMA for an MOP incident, or the CA directing the response, is responsible for payment of costs associated with an emergency response (including for organisations supporting the response) unless other funding arrangements are established.

Other funding arrangements for MOP incidents include:

- Funding arrangements to support the National Plan are based on the polluter pays principles, this includes:
 - Under POWBONS whereby DoT or a Port Authority may seek to recover all costs and expenses incurred.
 - For shipping, through the implementation of relevant international conventions under the auspices of the IMO. Reimbursement is normally through international liability and compensation funds, or shipowner's liability insurers known as Protection & Indemnity Clubs (P&I Clubs).
 - For the offshore petroleum industry, through the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*, the *Petroleum (Submerged Lands) Act 1982*, and the *Petroleum Pipelines Act 1969*.

- All agencies responding to and incurring costs in relation to ship sourced pollution incidents where the polluter is not identified, or costs are not recoverable, may be able to recover their costs from AMSA under the provisions associated with the Protection of the Sea Levy.
- Where response resources are inadequate because of insufficient funds or a lack of suitable/appropriate items, supplementary funding through the relevant Minister for the HMA or Controlling Agency may be sought (Source: Treasurers Instruction 302 – Supplementation of Appropriations).

9.2. National Capabilities

9.2.1. Incident Control Advisors

Incident control can be a demanding responsibility and effective incident control is essential to the safe and effective management of a MOP Incident. AMSA on behalf of the National Plan and its stakeholders maintains a pool of Incident Control Advisors as part of the NRT available to support the management of an MOP incident where required.

The IC Advisor will act as a mentor to the IC. Personnel fulfilling this position will have experience in emergency and oil spill management. The IC Advisor will not make decisions for or on behalf of the IC.

Activation of IC Advisors from the NRT is achieved via request through the SMPC for any actual or impending Level 2/3 MOP incident where advice is required.

9.2.2. Environmental, Scientific and Technical Network

Environmental, scientific, and technical advice is essential to make informed and effective decisions as part of an MOP incident. AMSA on behalf of the National Plan and its stakeholders maintains a network of Environmental, Scientific, and technical advisors, available to support the management of an MOP incident where required. This is supported by a series of memoranda of understanding and contracts that exist with technical and scientific agencies to provide expert capability to support National Plan stakeholder needs. Technical Advisors have an advisory role only. They do not have any decision making or management responsibilities within the IMT, instead they operate in support of response operations across three broad areas of activity:

- Independent analysis, including challenging planning assumptions and analysis, assessing the strength of operational intelligence, providing alternative response options, and assessing the potential for surprise.
- Mentoring, including advising key response personnel and identifying gaps.
- Specialist advice, such as environmental, chemical behaviour and dispersants technical information and considerations.

Activation of Technical Advisors from the Environmental, Scientific and Technical Network is achieved via request through the SMPC for any actual or impending Level 2/3 MOP incident where advice is required.

9.3. Analysis and Decision Support Tools

9.3.1. Oil Spill Trajectory Models and Automated Data Inquiry for Oil Spills

Computer-generated Oil Spill Trajectory Models (OSTM) predict the behaviour of oil in the marine environment and are valuable tools in response and contingency planning. AMSA on behalf of the National Plan and its stakeholders maintains Trajectory Modelling support services for use in an incident. The movement and weathering of oil is calculated using data from met-ocean currents, wind forces and chemical behaviours. An OSTM is only as accurate as the data used to generate it, therefore it is important to validate the model created with 'on the ground' measurements.

Activation of OSTM services through AMSA is achieved via request through the SMPC for any actual or impending MOP incident where modelling is required.

The Automated Data Inquiry for Oil Spills (ADIOS) is a weathering model used to predict how oil will break down in the marine environment. It provides response planners with an indication of how long an oil spill may persist in the environment, and the best options for clean-up. The model uses weather conditions and chemical properties of the oil (either selected from the ADIOS library or manually entered) to predict the rate of evaporation, dissolution, and emulsification.

ADIOS is maintained by the US Government's National Oceanographic and Atmospheric Administration (NOAA). It is available via the NOAA's Office of Response and Restoration's website.

9.3.2. Oil Spill Response Atlas

The WA Oil Spill Response Atlas (OSRA) is a spatial database of environmental, logistical and oil spill response data. Using a geographical information system (GIS) platform, OSRA displays datasets collated from a range of custodians allowing decision makers to visualise environmental sensitivities and response considerations for both contingency and incident planning. OSRA is managed by the MEER team within DoT Maritime.

OSRA is accessible via a Web Map Application available on the DoT Maritime Website with logins managed by DoT's MEER Team (or via a GIS application internal to DoT).

9.3.3. Net Environmental Benefit Analysis/Spill Impact Mitigation Assessment

A WA Net Environmental Benefit Analysis/Spill Impact Mitigation Assessment (NEBA/SIMA) Tool has been developed based on National Plan Guidelines and International Petroleum Industry Environmental Conservation Association (IPIECA) guidelines. This tool aids in the selection of response strategies in accordance with identified protection priorities.

The NEBA/SIMA Tool is available on the DoT Maritime Website.

9.3.4. PESTLEO Assessment

WA DoT uses a PESTLEO as one of the primary risk assessment tools in the development of an IAP. The PESTLEO tool has been developed based on the National Plan guidelines and general Emergency Management guidelines. This tool aids in the identification of external factors and risk that may be beyond the immediate control of the CA. This tool enables the IMT to consider the broader considerations of a response in the areas of Political, Economic, Social, Technological, Legal, Environmental and Operational risk. It helps to ensure that decisions proposed have been risk assessed and considered within a strategic context and to identify any issues that may affect the response.

The PESTLEO Tool is available on the DoT Maritime Website.

9.3.5. Geographic Information Systems and Common Operating Picture

As part of its ICC capability and through the intelligence function of an IMT, DoT as a CA maintains a series of GIS applications that facilitate the generation of a Digital Common Operating Picture (COP) and collation of Shoreline Assessment Data. Other CAs should seek to enable their own ICC/IMT arrangements with appropriate GIS/COP capabilities to support management of an MOP incident.

External to DoT, access to DoT's GIS/COP capabilities is restrictive due to information security and IT compatibility considerations. None the less, requests for access to DoT GIS/COP capabilities can be made by another CA via request through the SMPC.

9.3.6. Dispersant Consent Framework

A Dispersant Consent Use Guidance Note has been developed to outline the consent framework for the use of dispersants in or adjacent to WA State Waters (inclusive of Port Waters) during a MOP incident. During a response to a MOP incident in State waters, regardless of the source, the use of dispersants requires the written consent of the SMPC. Additionally, the use of dispersants in Commonwealth Waters where impacts may result to State Waters also requires formal consultation.

In considering the use of dispersants, the decision-making process outlined in the Obtaining Approval to use an Oil Spill Control Agent at Sea or on a Shoreline (AMSA, 2022) document should be used. Any consent from the SMPC may come with conditions and it is a requirement that the use of dispersants be closely monitored and reviewed for continuation.

Note: Further information on the use of dispersants in or adjacent to WA State Waters (inclusive of Port Waters), including the Obtaining Approval to use an Oil Spill Control Agent at Sea or on a Shoreline (AMSA 2022) document is outlined in the Dispersant Consent Use Guidance Note on the DoT Maritime Website.

Any requests for consent to use dispersants in State Waters are made through the SMPC.

9.3.7. Response Phase Monitoring

AMSA on behalf of the National Plan and its stakeholders maintains capabilities and partnerships for the facilitation of Response Phase Monitoring. Response Phase Monitoring seeks to assess the effectiveness of response strategies and should be implemented at the earliest stages of a response. The CSIRO Oil Spill Monitoring Handbook provides advice on the scope and implementation of monitoring activities in support of response operations.

Copies of or information from CSIRO Oil Spill Monitoring Handbook are available via request to the MEER team or AMSA. Activation of Response Phase Monitoring services through AMSA is achieved via request through the SMPC for any actual or impending MOP incident where monitoring is required.

10. Arrangements for Other Related Hazards

This section outlines the arrangements for managing multiple, consequential hazards as part of an MOP incident, through the application of arrangements outlined the EM framework for WA.

10.1. Management of Multiple Consequential Hazards

For any MOP incident where multiple, consequential hazards are also occurring, the SMPC will facilitate clarification of incident management arrangements for the MOP component if there is uncertainty. This will be done in accordance with the State EM Plan section 5.1.2, which states:

“Where a situation involves the occurrence of multiple, consequential hazards, the hazard that initiates the incident will determine the Controlling Agency. If a consequential hazard presents a significantly greater risk than the initiating hazard, management of the incident may be transferred to the relevant Controlling Agency for the subsequent hazard by agreement between the two agencies.”

Note: In emergency management an incident, emergency and crisis can either be the same thing or three separate things, this is evident in the example where a vessel collision being a marine transport emergency may be the incident, the subsequent marine oil pollution that results from any oil spill may be the emergency and the resultant impact on community in the form of tourism and fisheries impacts may be the crisis. This IMP only focuses on the management of the incident or emergency.

For any incident, where a CA is unclear or an agreement cannot be reached by responding personnel, the State Emergency Management Procedure 4.1 outlines the process to be applied, this will be adhered to by the SMPC if necessary.

10.2. Marine Transport Emergency

It is possible that an MOP incident is occurring in conjunction with or because of a Marine Transport Emergency (MTE). An MTE is an actual or impending event involving a vessel (including collision, a stranding, or an incident of navigation) if that event is capable of causing or resulting in:

- material damage to the vessel or another vessel.
- loss of life, injury to a person or damage to the health of a person, property, or the environment; or
- a hazard to the navigation of other vessels.

DoT is also the HMA for MTE incidents and arrangements for the management of MTE incidents in WA are outlined in the SHP-MEE and the Incident Management Plan – Marine Transport Emergency. Provisions in the National Plan for Maritime Casualty Management are also relevant. The interplay between an MOP and MTE will be overseen and coordinated by the SMPC. Collectively these hazards are referred to as Maritime Environmental Emergencies.

10.3. Hazardous Materials Emergency

It is possible that an MOP incident occurs in conjunction with a Hazardous Materials (HAZMAT) Emergency. A HAZMAT Emergency encompasses emergencies arising from a level 2/3 HAZMAT/CBR incident and are emergencies resulting from the actual or impending spilling, release or escape of a chemical, radiological or other substance that is capable of causing loss of life, injury to a person or damage to the health of a person, property, or the environment.

The Fire and Emergency Services (FES) Commissioner is the HMA for HAZMAT emergencies and arrangements for the management of HAZMAT emergencies are outlined in the State Hazard Plan-Hazardous Materials Emergencies (SHP-HAZMAT). The SHP-HAZMAT includes arrangements for managing spills of oil originating on land however as per SHP-HAZMAT requirements, DoT has a responsibility to assist the HMA with emergencies involving HAZMAT in State waters.

Note: As a sub-set to the SHP-HAZMAT, the Commissioner of Police is the HMA for Radiation Escape from a Nuclear-Powered Warship (HAZMAT Annex A)

Given the requirement to prioritise community and responder safety in an emergency, as per the state strategic control priorities, it is expected that when an MOP and HAZMAT incident are occurring simultaneously or consequentially, if the HAZMAT presents the greater risk, the CA arrangements for the overall incident will be defined by arrangements outlined in the SHP-HAZMAT.

Regardless, DoT or a Port Authority will remain responsible for the MOP component of the emergency as relevant.

10.4. Vessel or Maritime Facility Fire

It is possible that an MOP incident occurs in conjunction with a fire. A fire refers to any actual or impending fire that impacts and/or causes or threatens to cause injury, loss of life and/or damage to property or natural environment that may require a response.

The FES Commissioner is the HMA for Fire and arrangements for the management of Fire are outlined in the State Hazard Plan-Fire (SHP-FIRE). The SHP-FIRE includes arrangements for managing shipboard fires in WA State Waters (inclusive of Port Waters).

Note: The Fire Brigades Act 1942 also applies where a fire occurs on-board a ship lying in any river, harbour, or other waters within or adjacent to any Fire District

Given the requirement to prioritise community and responder safety in an emergency, as per the state strategic control priorities, it is expected that when an MOP and Fire incident are occurring simultaneously or consequentially, if the Fire presents the greater risk, the CA arrangements for the overall incident will be defined by arrangements outlined in the SHP-FIRE.

Regardless, DoT or a Port Authority will remain responsible for the MOP component of the emergency as relevant.

10.5. Marine Search and Rescue

It is possible that an MOP incident occurs in conjunction with a Search and Rescue. Search and Rescue includes “persons who are lost or in distress in waters or on a vessel in waters.”

The Commissioner of Police is the HMA for Search and Rescue and arrangements for the management of Search and Rescue are outlined in the State Hazard Plan-Persons lost or in distress requiring a Search and Rescue response (SHP-SAR Emergency).

Given the requirement to prioritise community and responder safety in an emergency, as per the state strategic control priorities, it is expected that when an MOP and SAR incident are occurring simultaneously or consequentially, actions required as part of the SAR should be prioritised and thus the CA arrangements for the overall incident will be defined by arrangements outlined in the SHP-SAR Emergency until the SAR is complete and CA arrangements transition to those outlined in the SHP-MEE.

Regardless, DoT or a Port Authority will remain responsible for the MOP component of the emergency as relevant.

10.6. Other Hazards

Several other defined hazards can occur because of, as a cause of, or in conjunction with an MOP incident. These include the following and their relevant HMA and SHP arrangements.

- **Vessel Based Biosecurity** (Animal and Plant or Human) Incident
 - Human Biosecurity includes human pandemic or an actual or impending spillage, release or escape of a biological substance.
 - HMA is the CEO, Department of Health (Health)
 - Arrangements are outlined in the State Hazard Plan – Human Biosecurity
 - Animal and Plant Biosecurity includes an ‘Emergency Animal Disease,’ an ‘Emergency Plant Pest,’ a ‘Declared Pest,’ or an aquatic emergency animal disease outbreak.
 - HMA is the Director General of the Department of Primary Industry and Regional Development (DPIRD)
 - Arrangements are outlined in the State Hazard Plan – Animal and Plant Biosecurity
- **Hostile Act or Security Incident**
 - HMA is the Commissioner of Police (WAPOL)
 - Arrangements are outlined in the State Hazard Plan – Hostile Act
- **Severe Weather** (Cyclone and Storm)
 - HMA is the FES Commissioner (DFES)
 - Arrangements are outlined in the State Hazard Plan – Severe Weather
- **Energy Supply Disruption** (including domestic gas supply)
 - HMA for Energy Supply Disruption is the Coordinator of Energy (Energy Policy WA)
 - Arrangements for Energy Supply Disruption are outlined in the State Hazard Plan – Energy Supply Disruption
- **Animal Welfare Management**
 - DPIRD is responsible for coordinating animal welfare services in emergencies.
 - Arrangements for Animal Welfare are outlined in the State Support Plan – Animal Welfare

- **Supply Disruption**

- There is no specific arrangement for the management of supply chain disruptions in the State Emergency Management Framework.
- Within the DoT is the Freight, Ports and Aviation Reform Directorate who can assist in addressing supply chain disruptions within WA if they occur because of an MOP incident. Their role is to provide integrated transport strategy, policy, planning, and programs to achieve a sustainable freight system, supply chains, ports, and related services for moving freight.

11. MOP Incident Management System

This section outlines the Incident Management System applied by DoT as a HMA / JA for the management of a MOP incident in WA. This system is aligned to AIMS and the EM Framework in WA and can also be applied by any CA for a MOP incident.

11.1. Approach

For the management of MOP Incidents, DoT as a CA applies an Incident Management System (IMS) called the “MEER IMS” that is a hybrid application of the Australasian Inter-service Incident Management System (AIMS) and its “principles and structures,” along with the Incident Command System (ICS) and its “forms and processes.” This IMS is applied to all MOP incidents where DoT is the CA, or where DoT is managing the mobilisation of response resources in support of another CA. Further information on the MEER IMS is outlined in the IMS itself however it is important to note that the MEER IMS is underpinned by the principles of Management by Objectives, Functional Management, Span of Control, Flexibility and Unity of Command. Specifically, the MEER IMS also outlines specific arrangements for the management of an IMT, for the development and implementation of Incident Action Plans (IAP) and for the implementation of integrated safety and resources management.

11.2. Structure

The MEER IMS incorporates three levels of teams for the management of incidents, being a Crisis Management Team (CMT) or MEECC, an IMT and Field Response Resources. These are organised in a flexible and scalable structure which aligns to the key structural components of AIMS and the EM Framework, and includes the following components:

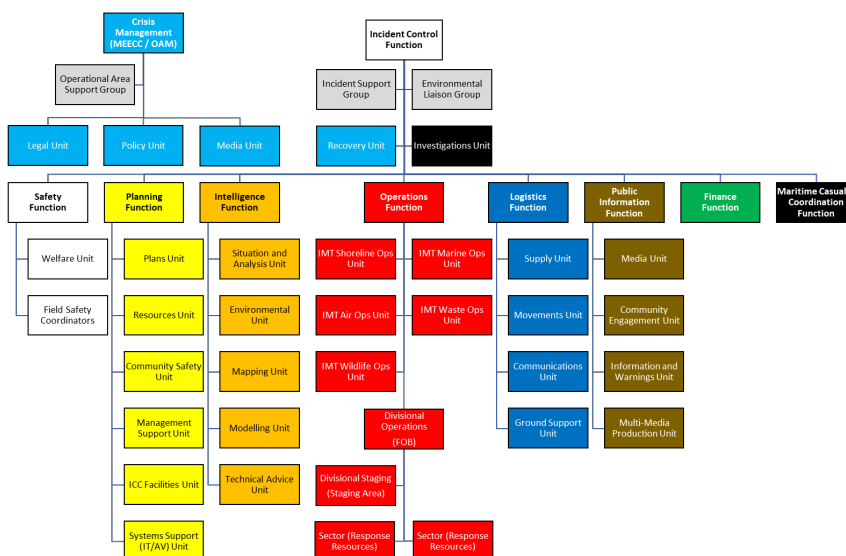


Figure 16: MEER IMS Structure (DoT, 2023)

Note: During a MOP incident, the exact composition of these teams will be relative to the requirements of the incident and structured at the discretion of the SMPC, Controlling Agency and Incident Controller.

11.3. Roles and Responsibilities

To define all roles and responsibilities as part of the MEER IMS, the AMSA Aide Memoir for Marine Pollution Response is applied to ensure consistency with National Plan standards.

Note: The AMSA Aide Memoir for Marine Pollution Response is available on the AMSA Website.

11.4. Management Processes

11.4.1. Initial Response and Proactive Planning Approach

The MEER IMS applies two distinct phases in the conduct of incident management aligned to the incident management phases of ICS and its planning cycle, they are:

- **Initial Response Phase:** This phase relates to the initial stages of an emergency where a simplified planning process and basic written IAP approach will commence in conjunction with the initial response to an actual or impending incident. All incidents commence in the Initial Response Phase and activation of an Initial Response Phase should occur as soon as this plan is activated.
- **Proactive Planning Phase:** This phase relates to the protracted stages of an emergency where a detailed planning process and detailed written IAP approach will occur in conjunction with the ongoing management of response actions to an actual incident. Transition to a proactive planning phase should only occur at the IC's discretion. Not all incidents require a transition to a proactive planning phase and any transition to the proactive phase should only occur in consideration of the incident stability, IMT capacity, and response complexity.

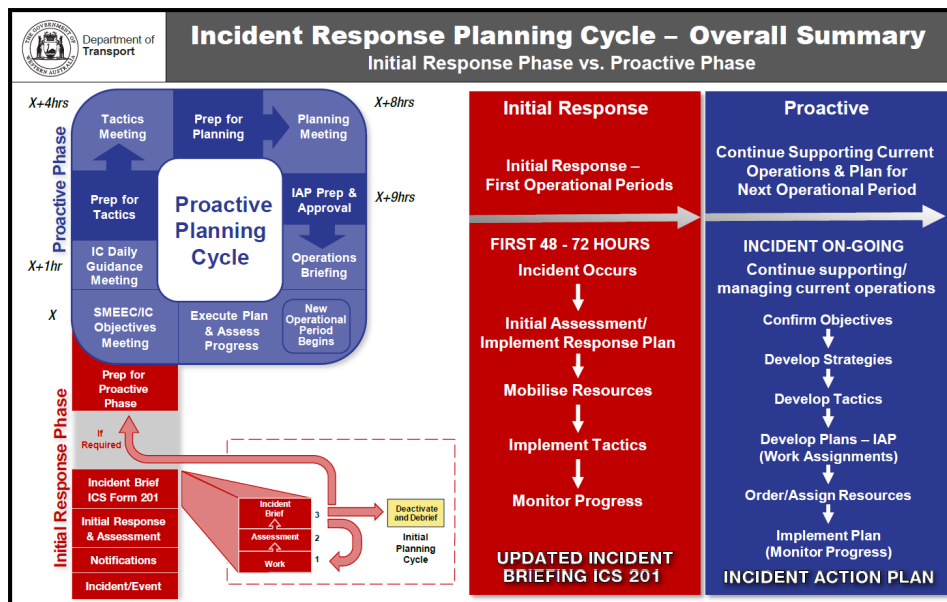


Figure 17: MEER IMS Planning Cycle (DoT, 2023)

11.4.2. Incident Action Plans and Field Task Assignments

The ICS includes specific processes for the conduct of planning to produce an IAP for each of these phases. The Planning Cycle, or "Planning P" as it is referred to, establishes a continuum for planning in and across these two phases. Sound and timely planning provides the foundation for effective incident management. The planning process represents a template that includes all steps that an IMT should take to develop and disseminate an effective IAP. As part of this, the MEER IMS applies a series of standardised forms and for the facilitation of IAP development, these align to the standard forms used as part of ICS and are hence called ICS forms.

As part of the MEER IMS, an IAP will also be supplemented by the development of Field Task Assignments for each field response team/resource. These assist in the communication of the IAP to specific response teams/resources and in the operational coordination of response activities in a safe and effective way. In general, for MOP Incidents, the following rules around IAP and Field Task Assignments should be followed:

- Initial Response Phase:
 - Iterative Written IAP produced using the Initial Incident Briefing forms (digital or hard copy) and provided as frequently as each Initial Incident Briefing occurs (at the direction of the IC).
 - Written Field Task Assignments provided where Defined Tactical Response Plans do not exist.
- Proactive Planning Phase:
 - Detailed Written IAP produced using the ICS forms (contents as determined by the IC) and provided for each operational period (at the direction of the IC, daily).
 - Written Field Task Assignments provided for all activities undertaken by response teams/resources.

11.5. Further Information

Further information on the MEER IMS is outlined in the IMS document including specific details and processes relating to:

- IMT Management
- Resource Management
- Communications Management
- Information Management
- Records Management
- Supporting Systems

12. MOP Safety Management System

This section outlines the Safety Management System applied by DoT as a CA for the management of a MOP incident in WA. All responders support an incident where DoT is the CA must adhere to the MEER SMS.

12.1. Approach

For the Management of MOP Incidents, DoT applies a Safety Management System (SMS), called the “MEER SMS” that ensures the safety of personnel and responders who are conducting work during an actual MOP incident that is under the direct control of DoT as a CA. Further information on the MEER SMS is outlined in the SMS itself.

12.2. Application

All personnel and responders (including permanent, contracted or volunteers) that support an incident where DoT is the CA must adhere to the MEER SMS. DoT personnel who are responding to a MOP incident in support of another controlling agency, will adhere to that organisation’s safety requirements however will also at a minimum still apply the personal safety standards and controls as outlined in the MEER SMS.

For other non-DoT personnel who are responding to a MOP incident controlled by DoT, although they are required to adhere to the MEER SMS, it does not preclude them from also adhering to any additional minimum personal safety standards and controls as required from their own organisation.

12.3. Key Safety Rules

The following are the five underpinning rules of safety as part of the MEER SMS and must be obeyed:

- Wear the right PPE.
- Ensure personnel decontamination and first aid capacity.
- Check equipment is serviceable prior to deployment.
- Follow relevant SMS, SOP’s, SWP’s and SDS’s
- Responders must be appropriately trained, certified, and qualified.

As part of these five underpinning rules, minimum Personal Protective Equipment (PPE) requirements exist, and PPE will be worn to minimise exposure to hazards that can cause serious workplace injuries and illnesses. Minimum qualification requirements also exist for certain roles/positions and the operation of certain equipment. This is also supported by minimum requirements outlined in Safe Work Practices and Standard Operating Procedures that must be adhered to as part of the MEER SMS.

The MEER SMS also outlines specific site management requirements as part of the establishment of response operations during a MOP incident. This includes stipulated site control and site coordination requirements. Site control is the physical control of a site and must include site check-in and check-out, identification of a muster point, management of adequate access control, application of HAZMAT hot/warm/cold zones, provision of decontamination facilities and process (where the site is contaminated) and posting of site safety signage where feasible. Site coordination is the practical coordination of all activities and resources within a specific site and must include the appointment of a site manager/coordinator and establishment of site safety plans where feasible.

12.4. Air Safety Monitoring

Air monitoring is used to measure the levels of potentially harmful substances at a spill site, to ensure responder safety. It is extremely crucial that spill responders are aware of the hazards associated with the type of substance spilled so they can take appropriate precautions. While when required an initial assessment and ongoing monitoring is done by a trained responder, it is important that all others be familiar with the MEER SMS requirements related to air safety thresholds and the general characteristics of any substance being encountered and associated risks where known.

13. Response Termination

This section outlines the requirements and procedures for concluding the response to an MOP incident in WA. It also includes details of outputs required to facilitate initial recovery consideration as part of response and subsequent transition to recovery management.

13.1. Responsibility for Termination

Response termination during an MOP incident is the responsibility of the CA, supported by the SMPC. The IC is responsible for ensuring the minimum response termination criteria are met before the response to an MOP incident is terminated and where required, transition to recovery occurs.

13.2. End Point Criteria

To determine when to conclude the response phase of an incident, End Point Criteria (EPC) are to be developed by the CA. This process allows for the formulation of agreed measurable criteria for determining when to stop operations. It also allows for the practical assessment to determine what level of 'cleaning' is required to be reached for the incident. It determines if the effort to respond operationally is no longer having an advantageous effect.

The CA initiates the formulation of the EPC, through the IC and is developed through a collaborative forum involving relevant stakeholders and advice from technical experts. EPC should be considered and established early in an incident response to assist in the prioritisation of response strategies and to ensure that suitable monitoring programs are implemented that will identify when EPC are reached. Final approval for the EPC is given by the IC and then for a response to terminate the CA is required to confirm the approved EPC have been met. For any Level 2/3 MOP incident approval of the EPC is also required from the SMPC and may include endorsement from the ESC if requested by the SMPC.

Note: For more information on the development of EPC the AMSA National Plan Guidance on: Response, Assessment and Termination of Cleaning for Oil Contaminated Foreshores is a useful reference and is publicly available on the AMSA website.

DoT has a template for the development of EPC that can be requested through the SMPC.

13.3. Demobilisation

For any MOP incident, resources that have been mobilised will eventually have to be demobilised. Demobilisation should be managed by the CA through the establishment of a specific demobilisation plan. There can be multiple thresholds for demobilisation of resources in an incident, including:

- Specific resource is no longer required.
- Stand down of specific personnel as part of shift rotations and handovers.
- De-escalation of incident classification to a lower incident level.
- Attainment of EPC.

As per the cascade approach for resource mobilisation outlined in both the SHP-MEE and National Plan, demobilisation should see use of resources deescalated through the demobilisation of national, state then local resources. The diagram below outlines the general process for the demobilisation of response resources.

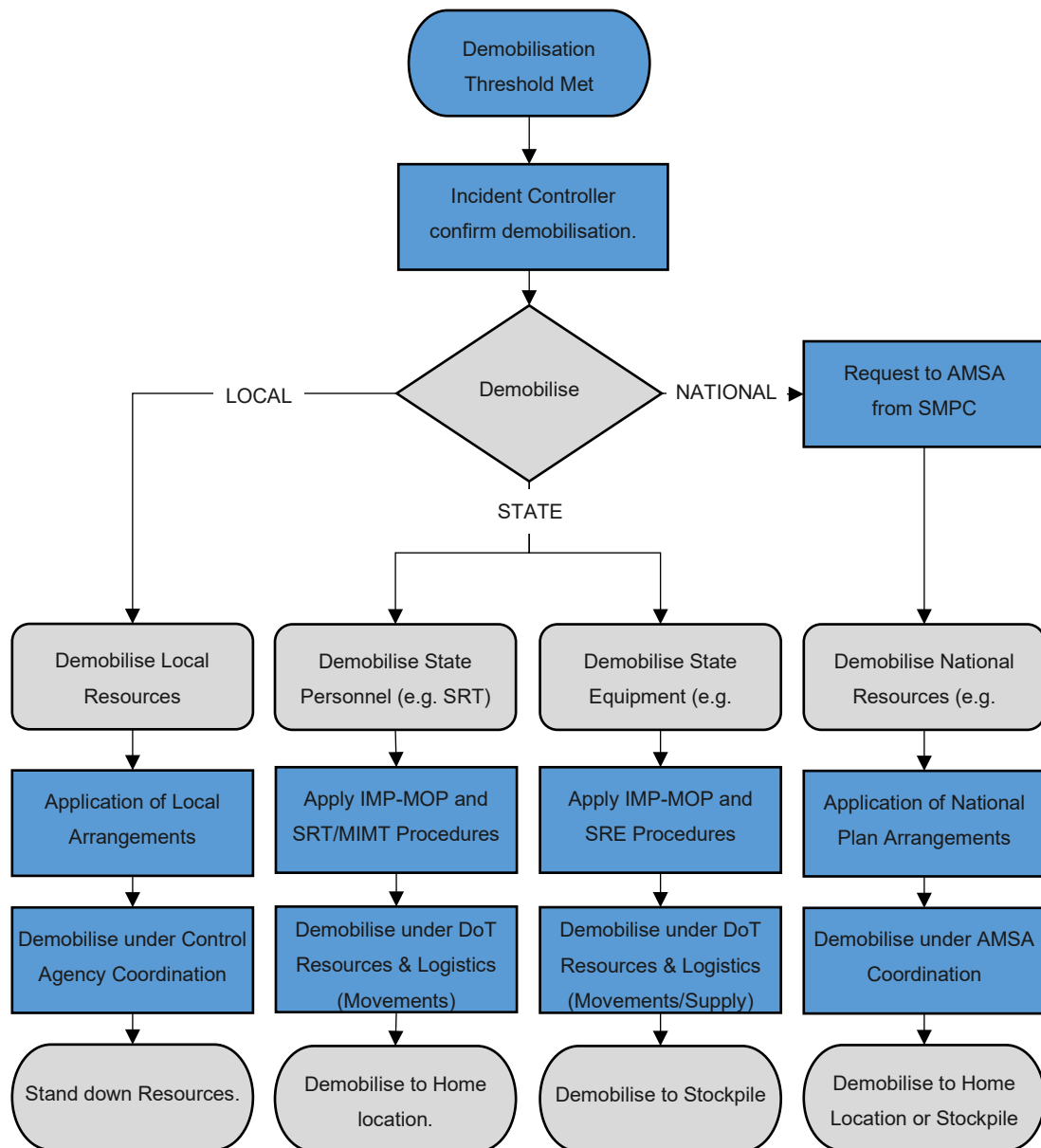


Figure 18: Equipment and Personnel Demobilisation Flowchart

13.3.1. Personnel Demobilisation

The demobilisation of personnel linked to State and National Capability will be coordinated by DoT as the HMA / JA. This will be achieved either under the coordination of the SMPC (supported by the MEECC) when DoT is not the CA, or under the control of the IC (supported by the IMT) when DoT is the CA. In either case, the following procedures for demobilisation will be applied:

- The Logistics Function will facilitate arrangements relating to the following associated with personnel demobilisation:
 - Movements
- The Resources Unit will manage all resource tracking associated with Personnel demobilisation.
- As part of demobilisation, personnel will be demobilised from either a Staging Area or an ICC from where the Staging Area Coordinator (Operations Function) or ICC Facilities Unit (Planning Function) will manage checkout and offboarding from the incident.
- Personnel will either be demobilised by vehicle, vessel, or air travel as appropriate.
- National plan personnel will be demobilised under stipulated national plan arrangements under coordination of AMSA in support of DoT as the JA.

13.3.2. Equipment Demobilisation

The demobilisation of equipment linked to State and National Capability will be coordinated by DoT as the HMA / JA. This will be achieved either under the coordination of the SMPC (supported by the MEECC) when DoT is not the CA, or under the control of the IC (supported by the IMT) when DoT is the CA. In either case, the following procedures for demobilisation will be applied:

- The Logistics Function will facilitate arrangements relating to the following associated with equipment demobilisation:
 - Stockpile Coordinator
 - Movements/Freight
 - Remediation (including maintenance, repairs, and cleaning)
- The Resources Unit will manage all resource tracking associated with equipment demobilisation.
- As part of demobilisation, equipment will be mobilised from either a Specific Deployment Site, Staging Area, or an ICC from where the Staging Area Coordinator (Operations Function) or ICC Facilities Unit (Planning Function) will manage dispatch and checkout from the incident.
- Equipment will either be demobilised by vehicle/tow, vessel or, freight (truck/air) as appropriate.
- National plan equipment will be demobilised under stipulated national plan arrangements under coordination of AMSA in support of DoT as the JA.

13.4. Initial Recovery Coordination

As per requirements outlined in the SHP-MEE, the HMA is responsible for ensuring an effective recovery process is initiated for a MEE incident. This includes the commencement of initial recovery coordination actions undertaken by the CA during the response phase and as part of response termination, including:

- Appointment of Recovery Coordinator
- Development of Impact Statement
- Handover to Recovery Coordination Committee(s)

Note: A deliberate recovery process must be initiated for any Level 2/3 Incident.

13.4.1. Recovery Coordinator

During a Level 2/3 MOP incident the CA through the IC must appoint a Recovery Coordinator to initiate recovery actions and commence the development of an Impact Statement. Where required, the Recovery Coordinator can seek support via the ISG and the ELG. The allocation of additional resources to support recovery coordination during response is at the discretion of the IC. Where DoT is not the CA, a request can be made to the SMPC that DoT appoint a Recovery Coordinator as part of the MEECC to initiate recovery actions if it is beyond the capacity of the actual CA.

Activation of a Recovery Coordinator is via notification and appointment from the relevant CA for any MOP incident within their responsibility and as per their specific incident management procedures as soon as a level 2/3 MOP incident has been declared.

13.4.2. Impact Statement

During any Level 2/3 MOP Incident, the CA through an appointed Recovery Coordinator must develop and complete an Impact Statement prior to response termination as per requirements outlined in the State EM Procedures for Recovery.

An impact statement should include the following information:

- Incident details
- Summary of known, emerging or anticipated impacts
- Emerging risks and Risk assessment
- Contact details of contributing organisations
- Impact details against each of the following:
 - Social environment.
 - Natural environment.
 - Economic environment.
 - Built environment.
- Supporting attachments (maps, images etc.)

Note: A template of the Impact Statement and a guide for its development are available on the SEMC Website.

13.4.3. Handover to Recovery Coordination Committee(s)

As part of response termination for any Level 2/3 MOP Incident, the CA must handover-initiated recovery actions and a completed impact statement to the Recovery Coordination Committee(s) that will manage the subsequent Recovery Phase of the incident. Recovery coordination post response can include one or a combination of the following:

- Local Recovery Coordination Committee (Chaired by a Local Recovery Coordinator)
- Marine Recovery Coordination Committee (Chaired by a Marine Recovery Coordinator)
- State Recovery Coordination Group (Chaired by a State Recovery Controller)

Note: If the CA believes it, the SMPC or any impacted Local Governments that state level recovery coordination is required for an MOP incident, prior to response termination, the SMPC will consult with the State Recovery Coordinator to recommend that a State Recovery Controller be appointed. Otherwise, the local recovery will be managed by the pre-identified Local Recovery Coordinator as per Local Emergency Preparedness Arrangements, and marine recovery will be managed by the appointed Marine Recovery Coordinator.

If a Marine Recovery is required, a Marine Recovery Coordinator will be appointed by the SMPC. This will occur in consultation with the CA and the Marine Recovery Coordinator may be appointed from the CA or DoT.

13.5. Scientific Monitoring

During any MOP Incident, the CA should consider if Scientific Monitoring should be implemented. During any Level 2/3 MOP Incident Scientific Monitoring must be implemented as the key tool for determining the impact the incident has had on the environment. Scientific monitoring is sometimes also referred to as Recovery Phase Monitoring however the commencement of monitoring can start as part of the Response Phase and where required should commence as part of Response Termination at the very least.

Scientific monitoring includes:

- Short- and long-term damage assessments
- Scientific studies on affected resources
- Any other monitoring activities not related to the response phase of managing an MOP incident.

Options for the management of Scientific Monitoring include:

- Where an approved/accepted Oil Spill Monitoring Plan (OSMP) exists (e.g. from an offshore petroleum activity) it should be used in the first instance.
- Where ongoing environmental monitoring as a part of an area's day-to-day operations exist (e.g. in ports) this should be incorporated as baseline data.
- Where an approved/accepted OSMP does not exist, the CA will be required to work with the ESC and ELG to develop a Scientific Monitoring Plan specific to the incident.

Note: Any management of Scientific Monitoring must be overseen by the IC, ESC and SMPC to ensure that it meets requirements for assessing environmental damage and impacts specific to each incident. Scientific Monitoring activities should also be included and documented as part of the IAP.

13.6. Investigations and Reporting

During any MOP Incident, the CA is responsible for initiating investigation and incident reporting requirements, as necessary. Investigations should be formally commenced for any Level 2/3 MOP Incident and for a Level 1 MOP Incident if it is believed an offence or critical safety issues has occurred or is the cause.

Any investigation must be conducted in accordance with relevant maritime, pollution or environmental legislation at both State and Commonwealth Government levels. Parallel investigations may be conducted (including by industry and underwriters) however in the management of the incident, the CA should assume the role as lead investigative agency unless the incident constitutes an offence and the agency responsible for the legislation relevant to that offence should be lead investigative agency.

Any investigation should result in the compiling of an official report, with the purpose being to:

- Identify and enable the addressing of root causes of an incident.
- Identify and highlight lessons from the incident.
- Identify and commence any actions in relation to offences as part of the incident.

Activation of an Investigator or Investigation Team is via notification and appointment from the relevant CA to the relevant individual or agency as per the specific nature of the incident.

For DoT, if the incident relates to an offence under POWBONS or the WAMA, if the incident is within a SPA Port, or if DoT is the Controlling Agency, the Marine Safety Investigations Unit can be activated to undertake investigations.

13.7. Lessons Management and Reviews

Following any Level 2/3 MOP incident, the CA should initiate a Post Incident Analysis (PIA) to assess the effectiveness of the management of the incident and established preparedness arrangements in place for MOP incidents. The PIA should include a collaboration of individual responder or incident management personnel experiences, formal debrief outcomes, incident reports, incident investigations and any outcomes of inquiries.

A PIA should be conducted in accordance with 'The Conduct of Post Event and Incident Analysis' guidelines published by AMSA and any lessons identified should be recorded or reported to DoT as the HMA for consideration around implementation.

Note: Any reports compiled as part of a PIA for a Level 2/3 MOP incident will also be provided by DoT to the SEMC in accordance with State EM requirements.

13.8. Cost Recovery

For any MOP incident, response and recovery costs incurred by the CA and/or DoT as the HMA / JA can be recovered, under the “polluter pays principles” as outlined in the National Plan. This possibility is underpinned by arrangements outlined in POWBONS and offshore petroleum legislation or international liability and compensation arrangements. Where a polluter is not identified, cost recovery can also be facilitated through provisions as part of the Protection of the Sea Levy.

Note: For any MOP incident, the prospect of successful cost recovery can be supported by the imposition of formal commitments or establishment of bonds with the identified or suspected polluter or maintenance of lawful control of an identified or suspected polluter’s asset (e.g. a vessel) until such formal commitments or establishment of bonds can occur.

As part of response termination, the CA is responsible for initiating and preparing claims for cost recovery. Claims for cost recovery must be backed by adequate financial and response management records from the incident to minimise issues relating to claim disputes.

13.9. Third Party Claims Management

Third Party Claims may be part of the overall incident cost recovery process, therefore these third parties must ensure that they use good practices and principles of cost management, such as accurate and reflective financial records. An example of where this may occur is when DoT takes over from a Port Authority as the CA however the Port Authority continues to assist with the incident as an combat agency and as such incurring costs that must be recovered through DoT as the CA and potentially subsequently through AMSA if the incident involves a Ship.

General principles of good practice and recordkeeping that may be adopted by third parties are:

- Summary of events – along with why this decision was made and the justification behind the action.
- Record names and addresses of the contractors/suppliers of any transaction.
- Where an expense has been incurred, third party invoices stored and provided as part of the claim.
- Response measures must be deemed to be reasonable and justifiable -proportionate.
- Obtain different quotes and to ensure equipment hire rates were reasonable.
- Record all dates that work was conducted and which suites this work occurred.
- Keep a record of the number and types of response personnel, including hours worked both regular/overtime, their rates of pay and who has been authorising the payment of these personnel, names included.
- Record all travel, accommodation and out of pocket living costs for response personnel.
- Ensure that hire rates for response equipment in use and on standby have been calculated.
- Maintain records for all equipment costs at every site that has been established, this would include:
 - type of equipment.
 - rate of hire.
 - cost of purchases.
 - quantity of each piece of equipment.
 - period of use – In use and on standby.
- Record and photograph all equipment damage and obtain quotes from different technical trades prior to repair or replacement.

- Record all used consumable materials such as personal protective equipment which can be simply recorded in a register.
- Ensure that you keep a record of all waste management removal, handling, and disposal.

For further information on Claims Management processes providing the MOP originates from a Ship, please see the AMSA National Plan for Maritime Emergencies – Claims Management Guidelines in the References section.

13.10. Waste Disposal and/or Remediation/Treatment

For any MOP incident, removal of oil out of the environment may result in large amounts of waste being generated. For example, removal of oil out of water can result in large volumes of water also being removed due to the difficulties with separation from the oil. The same can also occur when cleaning shorelines where the removal of oil off the sand often results in large volumes of lightly contaminated sand also being removed. As part of response termination, the CA is required to initiate and confirm a waste disposal plan for ongoing implementation and management through the recovery phase.

Waste disposal post response can include the following broad strategies:

- Where waste contamination is low, alternative waste management methods such as bioremediation may be viable.
- Where waste includes contaminants mixed with water, treatment to reduce required disposal volumes may be viable.
- General disposal of contaminated waste at a licensed waste facility/site

Note: Waste planning and management will require approvals from relevant agencies (e.g. DWER and Local Government) before specific options can be considered or confirmed.

Support for waste planning can be sought through the SMPC and waste disposal and remediation or treatment options should be considered as part of broader waste management throughout the response phase through CA collaboration with relevant waste management agencies and providers.

14. References

This section outlines references included in this document, as well as key acronyms and the definition of key terms.

14.1. Acronyms

Table 14 Below outlines the key acronyms used in this plan.

Table 14: Key Acronyms List

Acronym	Meaning
ADIOS	Automated Data Inquiry for Oil Spills
AIIMS	Australasian Inter-service Incident Management System
AMSA	Australian Maritime Safety Authority
AMOSC	Australian Marine Oil Spill Centre
CA	Controlling Agency
CMT	Crisis Management Team
COP	Common Operating Picture
DBCA	Department of Biosecurity, Conservation and Attractions
DFES	Department Fire Emergency Service
DoT	Department of Transport
DPIRD	Department of Primary Industries and Regional Development
DWER	Department of Water and Environmental Regulation
ELG	Environmental Liaison Group
EMA	Emergency Management Act 2005
EMR	Emergency Management Regulations 2006
ESC	Environmental Scientific Coordinator
EPC	End Point Criteria
FES	Fire and Emergency Services

Acronym	Meaning
FOB	Forward Operating Base
GIS	geographical information system
HAZMAT	Hazardous Materials
HFO	Heavy Fuel Oil
HMA	Hazard Management Agency
IAP	Incident Action Plan
IC	Incident Controller
ICC	Incident Control Centre
IFO	Intermediate Fuel Oil
IMP	Incident Management Plan
IMO	International Maritime Organisation
IMS	Incident Management System
IMT	Incident Management Team
INB	Incident Notification Brief
ING	Incident Guidance Note
IPIECA	International Petroleum Industry Environmental Conservation Association
ISG	Incident Support Group
JA	Jurisdictional Authority
JRCC	Joint Rescue Coordination Centre
JSCC	Joint Strategic Coordination Committee
MDO	Marine Diesel Oil
MEECC	Maritime Environmental Emergency Coordination Centre
MEE	Maritime Environmental Emergencies
MEER	Maritime Environmental Emergency Response
MIMT	Maritime Incident Management Team
MOP	Marine Oil Pollution

Acronym	Meaning
MTE	Marine Transport Emergencies
NEBA/SIMA	Net Environmental Benefit Analysis/Spill Impact Mitigation Assessment
NP	The National Plan for Maritime Environmental Emergencies 2017
NRT	National Response Team
OASG	Operational Area Support Group
OCS	Offshore Constitutional Settlement
OMA	Operational Area Manager
OPEP	Oil Pollution Emergency Plans
OSCP	Oil Spill Contingency Plans
OSMP	Oil Spill Monitoring Plan
OSRA	Oil Spill Response Atlas
OSTM	Oil Spill Trajectory Models
OWA	Oiled Wildlife Advisor
PAA	Port Authority Act
PIA	Post Incident Analysis
PGN	Port Guidance Note
POWBONS	Pollution of Waters by Oil and Noxious Substances Act 1987
PPE	Personal Protective Equipment
SDS	Safety Data Sheet
SAR	Search and Rescue Response
SEC	State Emergency Coordinator
SECG	State Emergency Coordination Group
SEMC	State Emergency Management Committee
SHP-FIRE	State Hazard Plan-Fire
SHP-HAZMAT	State Hazard Plan-Hazardous Materials Emergencies
SHP - MEE	State Hazard Plan – Maritime Environmental Emergencies

Acronym	Meaning
SitRep	Situation Report
SMPC	State Marine Pollution Coordinator
SMS	Safety Management System
SOP	Standard Operating Procedure
SOPEP	Shipboard Oil Pollution Emergency Plan
SRE	State Response Equipment
SRT	State Response Team
SWP	Safe Work Practice
TRP	Tactical Response Plans
TSB	Territorial Sea Baseline
WAPOL	Western Australian Police

14.2. Glossary

Table 15 Below outlines the definition of key terms used in this plan.

Table 15: Glossary of Key Terms

Term	Definition
AMOSPlan	AMOSPlan is managed by the Australian Marine Oil Spill Centre (AMOSC) and outlines the cooperative arrangements for response to oil spills by Australian oil and associated industries.
Appropriate Authority	Deemed by the Pollution of Waters by Oil and Noxious Substances Act 1987 (POWBONS) to be able to take or cause to be taken such actions as it thinks fit to: <ul style="list-style-type: none"> • Prevent or limit the discharge. • Disperse or contain the oil or oily mixture that has been discharged. • Remove any oil or oily mixture from waters or land affected by the discharge. • Minimise the damage from pollution resulting from or likely to result from the discharge. • May also recover all costs and expenses incurred in respect to any action taken as listed above. • May also initiate prosecution action against any polluter suspected to have committed an offence detailed in the Act.
Australasian Inter-service Incident Management System (AIIMS)	A nationally adopted structure to formalise a coordinated approach to emergency incident management which combines facilities, equipment, personnel, procedures, and communications operating within a common organizational structure with responsibility for the management of allocated response resources.
Automated Data Inquiry for Oil Spills (ADIOS)	ADIOS is NOAA's oil weathering model and is an oil spill response tool that models how different types of oil weather (undergo physical and chemical changes) in the marine environment. With a database of more than a thousand different crude oils and refined products, the ADIOS model estimates the expected characteristics and behaviour of spilled oil.
Boat Harbour Operator	The agency or organisation responsible for the management and operation of a Boat Harbour or Marina.
Bunker Fuel	Bunker fuel means a heavy fuel oil, intermediate fuel oil, blended distillate, marine gas oil, diesel or non-hydrocarbon fuel used as on a vessel.
Chemical Dispersants	Chemical dispersants are formulations of chemicals in a liquid form that are sprayed onto spilled oil on the sea, or underwater at an oil release site, with the intention of causing the oil to be dispersed into the water column and degrade over time.
Coastal Waters	Coastal waters means the territorial sea to an outer limit of three nautical miles from Australia's baselines and any waters that are on the landward side of the baselines, including waters not within the limits of the State or Northern Territory

Term	Definition
Common Operating Picture (COP)	<p>The Common Operating Picture (COP) usually comprises a geographic information system (GIS) that provides a continuous updated comprehensive and interactive view of a range of spatial data and information about the incident to provide situational awareness.</p> <p>The situational awareness provided by a COP is a fundamental single source for the understanding of the relevant social, economic, environmental, and logistic aspects of the (potential) incident and allows informed and effective decisions to be made by responders within a suitable timeframe.</p>
Commonwealth Waters	<p>Commonwealth waters means all waters in the territorial sea and exclusive economic zone seaward of three nautical miles from Australia’s baselines.</p>
Control	<p>The overall direction of emergency management activities in a designated emergency. Authority for control is established in legislation or in an emergency management plan and carries with it the responsibility for tasking and coordinating other organisations in accordance with the needs of the situation.</p>
Controlling Agency (CA)	<p>The agency or organisation that has responsibility to control response activities to an actual or impending Maritime Environmental Emergency. The Control Agency will have responsibility for appointing the Incident Controller.</p>
Division Commander	<p>The appointed and suitably qualified Division Commander is responsible for the establishment, response activities and management of a FOB post personnel and equipment under the direction of the IMT.</p>
Emergency Management Districts	<p>An emergency management district with Western Australia established under section 28 Emergency Management Act 2005</p>
End Point Criteria (EPC)	<p>Environmental and operational response criteria established as part of the Incident Action Plan to determine points for terminate response activities.</p>
Environment	<p>Encompasses the complex of physical, chemical, and biological agents and factors which may impact on a person or a community, and may also include social, physical, and built elements, which surround and interact with a community.</p>
Environmental Liaison Group (ELG)	<p>ELG consists of a range of WA government agencies who provides expert, defensible and timely “whole of government” advice to the IC and CA on priorities for environmental protection and on the appropriateness of proposed response strategies.</p>
Environmental Scientific Co-Ordinator (ESC)	<p>The nominated person who provides scientific and environmental advice to the Incident Controller or State Maritime Environmental Emergencies Coordinator during a Maritime Environmental Emergency.</p>
Environmental, Scientific & Technical (ES&T) Network	<p>An advisor within the planning, intelligence, or operations functions, including acting as an on-site environmental, scientific, and technical advisor to minimise environmental harm from response actions.</p>

Term	Definition
First Strike Response Plan.	The prompt initial actions to protect the environment, the community and personnel and intended to limit the effect of an incident until such time as other resources can be deployed in support. This may involve actions to control and/or stabilise the source or casualty and minimising actual or potential spillage of oil into the marine environment and/or containing any oil that does enter the marine environment to minimise impacts and aid recovery.
Fixed Wing Aerial Dispersant Capability	Based on the concept of using large, fixed wing agricultural aircraft to apply oil spill dispersants. The capability is designed to complement dispersant spraying arrangements using vessels which are typically confined to close inshore work.
Forward Operating Base (FOB)	Centralised onsite control area, additional to the Incident Control Centre, to assist in the control of response operations.
Functional Responsibility	The responsibilities of agencies and organisations in relation to specific functions and activities for incident management. As laid out in the WA State Emergency Management Plan or for MOP specifically in the SHP-MEE.
Hazardous and Noxious Substance (HNS)	Hazardous and noxious substance means any substance which, if introduced into the marine environment, is likely to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.
Hazardous Material	A chemical, biological or radiological substance or material which has been determined by the appropriate authority or by its properties to be capable of posing an unreasonable risk to health, safety, and property.
Hazard Management Agency (HMA)	The Hazard Management Agency is a public authority or person prescribed under the Emergency Management Act 2005 who is responsible for emergency management, or the prescribed emergency management aspect, in the area prescribed of the hazard for which it is prescribed.
HMA for the hazards of marine oil pollution and marine transport emergency	<p>The Chief Executive Officer, DoT is the HMA for the hazards of marine oil pollution and marine transport emergency. Section 5 of the Emergency Management Act 2005 provides for the delegation of some or all of the powers, duties of an HMA. The Chief Executive Officer, DoT as the HMA has delegated all powers and duties under sections 50, 53 and 55 to the following DoT positions:</p> <ul style="list-style-type: none"> • Executive Director Maritime • Director Maritime Environmental Emergency Response (MEER) & Ports • Director Waterways Safety Management • Director Coastal Facilities Management
Incident Action Plan (IAP)	The plan used to describe the incident objectives, strategies, resources, and other information relevant to the control of an incident.
Incident Controller (IC)	The nominated individual responsible for the management of all incident control activities across a MOP/MTE emergency.

Term	Definition
Incident Control Centre (ICC)	Primary control area and base of operations for the Incident Management Team (IMT).
Incident Control System	The combination of facilities, equipment, personnel, procedures, and communications operating within a common organisational structure with responsibility for the management of allocated resources to effectively accomplish stated objectives relating to an incident.
Incident Level	Incident criteria as outlined in the State Hazard Plan – Maritime Environmental Emergency define the thresholds for which level an incident should be declared. Only a Controlling Agency through their appointed Incident Controller can assess the level of an incident which will then be confirmed by the State Marine Pollution Coordinator.
Incident Management Plan (IMP)	A written plan for a specific type of incident that describes how react to and manage the incident, including who will be involved and what they will do.
Incident Management Team (IMT)	The IMT is the group of incident management personnel comprised of the IC and personnel appointed by the IC to be responsible for the control of the response to a Maritime emergency.
Jurisdictional Authority (JA)	The Agency identified in the National Plan for Maritime Environmental Emergencies that has the jurisdictional or legislative responsibility to ensure there is adequate prevention of preparedness for, response to and recovery from a Maritime Environmental Emergency.
Joint Strategic Coordination Committee (JSCC)	The JSCC comprise of individuals deemed necessary to ensure an effective coordinated response across State/Commonwealth jurisdictions and the Petroleum title holder.
Marine Oil Pollution (MOP) Event	An actual or impending spillage, release or escape of oil or an oily mixture that is capable of causing loss of life, injury to a person or damage to the health of a person, property, or the environment.
Marine Transport Emergency (MTE) Event	An actual or impending event involving a vessel that is capable of material damage to the vessel or another vessel, loss of life, injury to a person or damage to the health of a person, property or the environment or a hazard to the navigation of other vessels.
Maritime Environmental Emergencies (MEE)	Collective name given to a marine oil pollution event and/or marine transport emergency event.
Maritime Facility	A wharf, jetty, anchorage, or mooring, used for the process of loading, or unloading of cargo, passengers, stores, equipment, or bunkers within a port.
Facility Operator	An entity with responsibility for the safe operation of a maritime facility, being a wharf, jetty, anchorage, or mooring, used for the process of loading, or unloading of cargo, passengers, stores, equipment, or bunkers within a port.

Term	Definition
Maritime Incident Management Team (MIMT)	A group of personnel from DoT and other State Government organisations trained to perform roles within an Incident Management Team.
Maximum Credible Scenario	Identification of the maximum credible incident provides a useful perspective on the potential release of an oil spill. “Credible” means the accident has the potential to occur within the lifetime of the facility or vessel.
National Plan for Maritime Environmental Emergencies (National Plan)	A nationally endorsed Plan that sets out national arrangements, policies, and principles for the management of Maritime Environmental Emergencies and managed by AMSA.
National Response Team (NRT)	A group of experienced personnel who can be seconded from Australian Government/ State/ Territory Agencies and industry to perform a range of response roles.
Net Environmental Benefit Analysis (NEBA)	A methodology for comparing and ranking the net environmental benefit associated with multiple response alternatives. Net environmental benefits are the gains in environmental services or other ecological properties attained by remediation or ecological restoration, minus the environmental injuries caused by those actions.
Petroleum Activity	Operations, works or pipelines as part of a ‘Petroleum Activity,’ as defined in the Petroleum (Submerged Lands) (Environment) Regulations 2012.
Oil	Hydrocarbon mixtures including crude oil, fuel oil, sludge, oil refuse, refined products, and condensates. Also including dissolved or dispersed hydrocarbons, whether obtained from plants or animals, mineral deposits, or by synthesis.
Oil Spill Contingency Plan (OSCP) or Oil Pollution Emergency Plan (OPEP)	A documented scheme of assigned responsibilities, actions, and procedures, required in the event of a marine oil pollution event.
Oil Spill Response Atlas (OSRA)	Oil Spill Response Atlas is a spatial database of environmental, logistical and oil spill response data. Using a geographical information system (GIS) platform, OSRA displays datasets collated from a range of custodians allowing decision makers to visualise environmental sensitivities and response considerations for both contingency and incident planning.
Oil Spill Trajectory Model (OSTM)	Oil Spill Trajectory Models (OSTM) is a computer spatial model that predict the behaviour and movement of oil in the marine environment using knowledge of meteorological and oceanographic conditions, the oil chemistry, and properties. OSTM is a valuable tool in response decision making and contingency planning.

Term	Definition
Operational Monitoring	Operational monitoring collects information about the spill and associated response activities to aid planning and decision making for executing effective spill response or clean-up operations.
Port Authority	A body established by section 4 of the Port Authorities Act 1999 to conduct the functions prescribed in Part 4 of that Act within a port that the Port Authority controls and manages.
Port Authority Waters	The area described in relation to a port by order made by the Governor under the Port Authorities Act 1999 section 24.
Port Operator	A body with responsibility to perform the duties of a Harbour Master prescribed in section 5 of the Shipping and Pilotage Act 1967 within a port declared pursuant to section 10(1) of the Act.
Recovery	Recovery means the process of assisting in the recovery of an environment/ecosystem and the community and infrastructure that has been degraded, damaged, or destroyed by a spill. It includes any or all actions taken to return the site and resources and any impacted resources to their pre-spill conditions. Recovery is an umbrella term that includes restoration, remediation, and potentially compensation for loss of public resource lost.
Responsible Party	Responsible party means the entity that has been identified as owning or having the legal responsibility for the vessel or facility that caused the incident.
Scientific Monitoring	Scientific monitoring focuses on non-response objectives and evaluating environmental impact and postimpact recovery from the spill and response activities. Scientific monitoring may be undertaken over an extended period to fully understand impacts.
Service Provider	An agency or organisation that aids the Controlling Agency in response to a Maritime Environmental Emergency.
Spill Impact Mitigation Assessment (SIMA)	SIMA is similar to the NEBA process that helps the selection of the most appropriate response option(s) to minimize the net impacts of spills on people, the environment, and other shared resources. SIMA focuses on ecological, socio-economic, and cultural considerations, and this new term eliminates the perceptions associated with the word 'benefit.'
Staging Area	An area where resources are mustered and prepared for allocation to an incident. It may include the provision of welfare and equipment maintenance facilities.
State Marine Pollution Coordinator (SMPC)	State Marine Pollution Controller is the nominated individual who has overall responsibility for ensuring that a response to a major incident within their relevant jurisdiction is managed and coordinated appropriately.
State Response Team (SRT)	A group of personnel from DoT, State Government organisations and selected external organisations trained to perform field response operations.

Term	Definition
Support Agency	An organisation or body providing support to a Control Agency. This may be in the form of equipment, personnel, or logistics.
Vessel	A craft for use, or that is capable of being used, in navigation by water, however propelled or moved, and includes an air-cushion vehicle, a barge, a lighter, a submersible, a ferry in chains and a wing-in- ground effect craft (EM Regulations r.14).
Vessel Master	The person having command or charge of a vessel, also referred to as the Master or Captain.
Vessel Owner	An entity owning a vessel or shares in a vessel.
Vessel Operator	A person or company that runs the vessel. The entity responsible for the commercial decisions concerning the employment of a vessel and therefore decides how and where that asset is employed.
Worst Case Scenario	A worst-case scenario is a scenario based on the so-called “realistic” major oil spills caused by an unrestricted and uncontrolled blowout rate and for a vessel the entire loss of oil cargo for tankers or bunkers from cargo or other vessel type.

14.3. References

The following key sources were referenced as part of the development of this plan:

- Australasian Fire and Emergency Service Authorities Council (AFAC) (2017). Australasian Inter-Service Incident Management System (AIIMS).
<https://www.afac.com.au/initiative/aiims>
- Australian Maritime Safety Authority (AMSA) (2020). National Plan for Maritime Environmental Emergencies and associated supporting documents.
<https://www.amsa.gov.au/marine-environment/national-plan-maritime-environmental-emergencies>
- Bureau of Infrastructure and Transport Research Economics (BITRE) (2022). Yearbook 2022: Australian Infrastructure and Transport Statistics, Statistical Report, BITRE, Canberra ACT.
<https://www.bitre.gov.au/sites/default/files/documents/bitre-yearbook-2022.pdf>
- Bureau of Meteorology (BOM) (2023). Beaufort Wind Scale.
<http://www.bom.gov.au/marine/knowledge-centre/reference/wind.shtml#:~:text=The%20Beaufort%20wind%20scale%20measures,to%20measure%20wind%20speed%20today.>
- Commonwealth Scientific and Industrial Research Organisation (CSIRO) (2016). Oil Spill Monitoring Handbook.
<https://publications.csiro.au/rpr/pub?list=SEA&pid=csiro:EP158596&sb=RECENT&expert=false&n=1&rpp=25&page=1&tr=17&q=oil%20spill&dr=all>
- Department of Biodiversity, Conservation and Attractions (DBCA) (2003). WA Oiled Wildlife Response Plan and Manual.
<https://www.dbca.wa.gov.au/wildlife-and-ecosystems/marine/marine-wildlife-response-oiled-wildlife-response>
- Department of Treasury (2022). Treasurers Instruction 302 – Supplementation of Appropriations.
https://www.wa.gov.au/system/files/2022-12/fab-update-no-90_0.pdf
- Department of Water and Environmental Regulation (DWER) (2019) Landfill Waste Classification and Waste Definitions 1996 (as amended 2019)
<https://www.der.wa.gov.au/images/documents/our-work/licences-and-works-approvals/WasteDefinitions-revised.pdf>
- Federal Emergency Management Agency (FEMA). (2023) Incident Command System (ICS).
https://www.fema.gov/sites/default/files/2020-07/fema_nims_doctrine-2017.pdf
- Geoscience Australia (2023). Maritime Boundary Definitions.
<https://www.ga.gov.au/scientific-topics/marine/jurisdiction/maritime-boundary-definitions>
- Government of Western Australia (1967). Shipping and Pilotage Act 1967.
https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_894_homepage.html

- Government of Western Australia (1987). Pollution of Waters by Oil and Noxious Substances Act 1987.
https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_731_homepage.html
- Government of Western Australia (1999). Port Authorities Act 1999.
https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_732_homepage.html
- Government of Western Australia (2005). Emergency Management Act 2005.
https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_294_homepage.html
- International Petroleum Industry Environmental Conservation Association (IPIECA) (2015). Response strategy development using net environmental benefit analysis (NEBA).
<https://www.ipieca.org/resources/response-strategy-development-using-net-environmental-benefit-analysis-neba>
- International Tanker Owners Pollution Federation Limited (ITOPF) (2023). Technical Information Papers (TIP)
<https://www.itopf.org/knowledge-resources/documents-guides/technical-information-papers/>
- State Emergency Management Committee (SEMC) (2023). State Emergency Management Framework and associated documents.
<https://www.wa.gov.au/organisation/state-emergency-management-committee/state-emergency-management-framework>
- AMSA Oils Spills from Ships – Who Pays Factsheet
[oil_spills_from_ships.pdf](#)
- AMSA National Plan for Maritime Emergencies – Claims Management Guidelines
[GUI-008 National Plan for Maritime Environmental Emergencies \(amsa.gov.au\)](#)